

PIECE GOODS MANUAL.

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FABRICS DESCRIBED, TEXTILE, KNIT GOODS,
WEAVING TERMS, ETC., EXPLAINED; WITH
NOTES ON THE CLASSIFICATION OF SAMPLES

*Compiled and Illustrated, as an Aid to Members of the
Chinese Maritime Customs Service,*

BY

A. E. BLANCO,

Second Assistant, A, Chinese Maritime Customs

SHANGHAI
STATISTICAL DEPARTMENT
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PREFACE.

THE following pages represent an attempt to compile, primarily for the benefit of members of the Chinese Maritime Customs Service, descriptions of cotton, woollen, and other fabrics, their weaves and finishes, etc., together with other information concerning terms currently used in the piece goods trade which are likely to be met with in invoices, applications, or contracts.

• This manual does not embrace all textiles known to the trade, but it does cover all those enumerated in the "Revised Import Tariff for the Trade of China," as well as many others. As far as possible the commonly accepted trade name has been used. It should, however, be borne in mind that many fabrics are known in the trade by a variety of names, so that one branch of the trade may not recognise a name applied to the same fabric by another branch.

The descriptions have been built up from information obtained first hand from practical weavers, manufacturers, wholesale and retail merchants, buyers, etc., as well as from personal visits to mills in the Manchester and Huddersfield districts, and from standard works on weaving. To Mr. G. W. Shaw, of Botham Hall, Huddersfield, I am indebted for introductions to the principal manufacturers in that district, enabling me to go through such mills as those of Mr. A. Whitwam and Messrs. Godfrey Sykes, where every phase of manufacture from raw material to finished goods was shown and explained with characteristic Yorkshire thoroughness. I am indebted for either information or actual samples, or both, to:—

Mr. A. F. H. Baldwin, American Commercial Attaché,
London.

John Bright & Bros., Limited, Rochdale.

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The Board of Trade (through their Piece Goods Expert, Mr. A. Sutton), John Bright & Bros., Limited, and Selfridge & Co., Limited, realising the value of classified information concerning descriptions of piece goods, have very kindly supplied me with ranges of samples.

The following works have been consulted, and their contents have materially assisted me. I take the opportunity of acknowledging my indebtedness to their authors, as well as to those of any other works consulted but which may have been omitted from this list:—

"Analysis of Woven Fabrics," by A. F. Barker and E. Midgley.
Bennett's "Glossary of Fabrics."
"Cotton," by R. J. Peake.
"Cotton Goods in China," by Ralph M. Odell, U.S. Commercial Agent.
"How to Buy and Judge Materials," by H. B. Heylin.

House of Representatives Document No. 643 (Report
of Tariff Board on Schedule 1 of the Tariff Law).

"Silk," by L. Hooper.

"Textiles," by William H. Dooley.

"Textiles," by Paul H. Nystrom, Ph.D.

"The Cotton Weaver's Handbook," by H. B. Heylin.

The Cotton Year Book.

"The Draper's Dictionary," by S. William Beck.

The Wool Year Book.

"Wool," by J. A. Hunter.

I wish specially to acknowledge my indebtedness to Mr. A. Sutton, Piece Goods Expert to the Board of Trade, London, for having perused the manuscript of the "Piece Goods Manual" and for the painstaking manner in which he pointed out where modifications were advisable. His suggestions have enabled me to revise definitions so as to make them agree with accepted trade interpretations.

A. E. BLANCO.

LONDON, 1915-16.

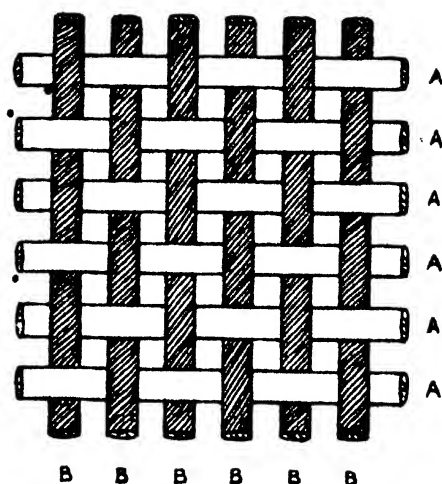


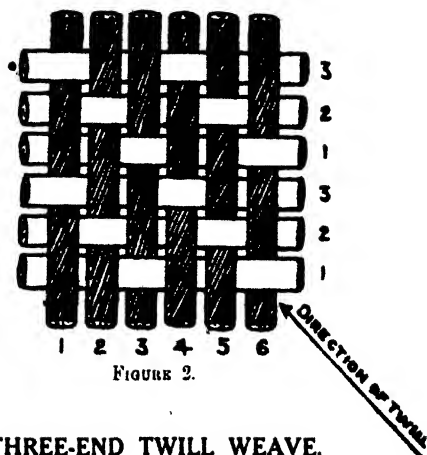
FIGURE 1.

PLAIN WEAVE.

A. Weft threads.

B. Warp threads.

Figure 1 shows the simplest manner of interlacing warp and weft threads. This style of weave is called plain, calico, or "one-over and one-under" weave.



THREE-END TWILL WEAVE.

This figure illustrates the interlacing of warp (shaded) and weft (white) threads, so as to produce a regular "three-end twill" weave. It also shows the direction of twill. In this figure the warp threads are shown interlaced with the weft threads in three distinct positions. There is a distinct predominance of warp threads thrown to the surface by this style of interlacing, and a fabric woven on this system would be "warp-faced." This weave is called a two-warp and one-weft regular twill, also Regatta and Galatea weave.

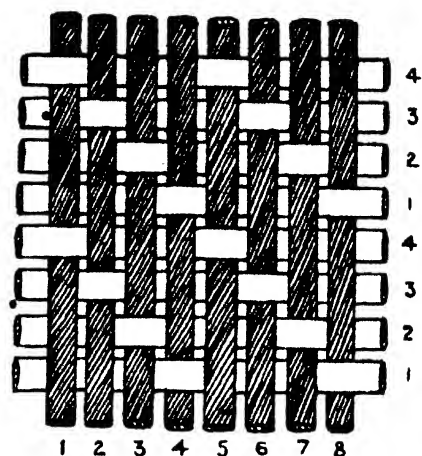


FIGURE 3.

FOUR-END TWILL WEAVE.

This figure illustrates a four-end, three-warp and one-weft, regular twill, also known as a Florentine twill, or a "three-up and one-down twill." The twill produced by this style of interlacing is well marked. The warp (shaded) predominates, and for this reason a cloth woven on this system of interlacing would be termed "warp-faced," or warp twill.

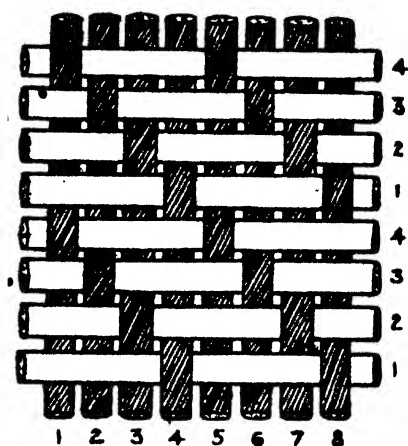


FIGURE 4.

FOUR-END WEFT TWILL WEAVE.

This figure, in which the weft threads predominate on the surface, illustrates a four-end, one-warp and three-weft, regular weft twill, in which three-quarters of the weft threads are thrown to the surface and the remaining quarter is warp. It is the reverse of Figure 3.

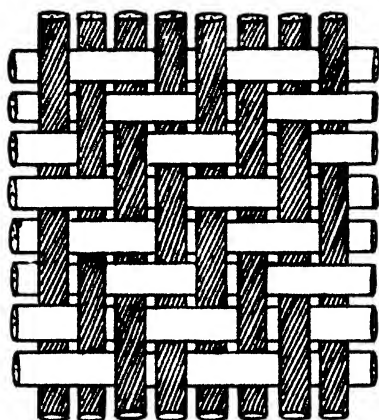


FIGURE 5.

TWO-AND-TWO TWILL WEAVE.

This figure illustrates a four-end, two-warp and two-weft, regular twill. Neither warp nor weft predominates on the surface. This style of twill is known as Harvard twill.

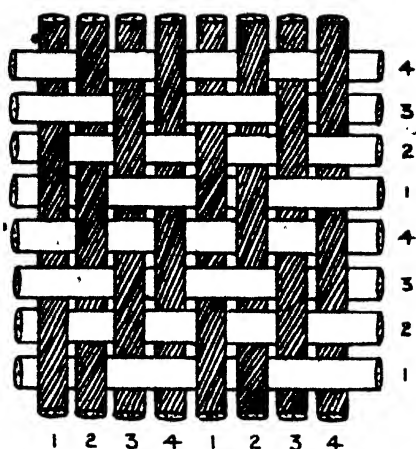


FIGURE 6.

IRREGULAR TWILL WEAVE.

This figure illustrates a broken or irregular twill, also known as a broken Harvard or Stockinette weave.

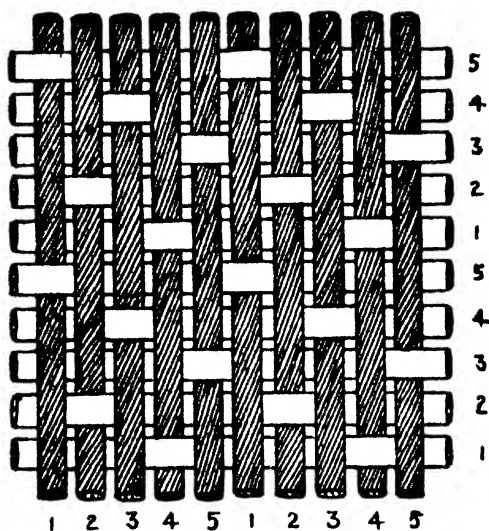


FIGURE 7.

FIVE-END WARP SATEEN WEAVE.

This figure illustrates the method of interlacing warp (shaded) and weft threads so as to produce a five-end warp sateen, or satin twill. This weave, in which the warp predominates on the surface, is reversed in Figure 8.

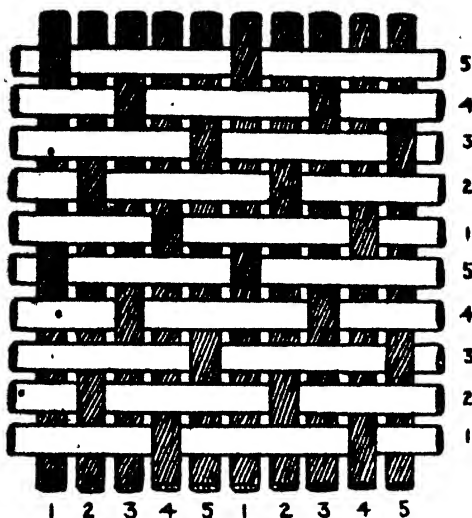


FIGURE 8.

FIVE-END WEFT SATEEN WEAVE.

This figure illustrates a five-end weft sateen. Sateen weaves are virtually a form of broken or rearranged twill. The weft sateen weave, represented by this figure, shows weft predominating on the face: it is practically the reverse of the weave shown by Figure 7.

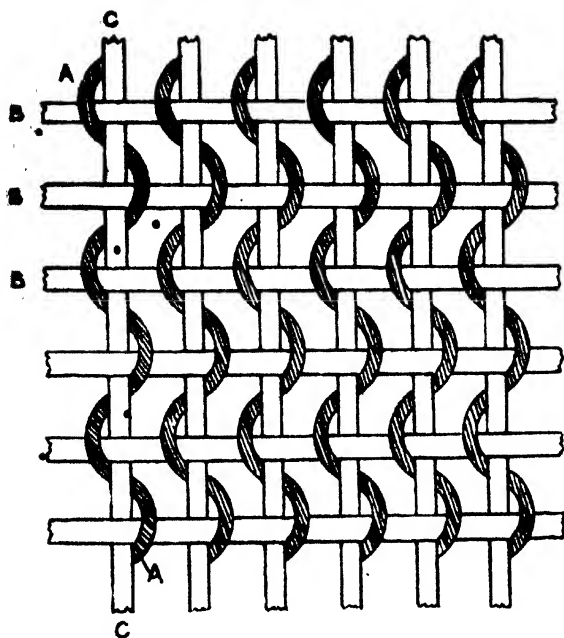


FIGURE 9.

SIMPLE PLAIN GAUZE WEAVE.

In this figure A are threads known as crossing threads and are typical of gauze weave; they are binding threads holding B (weft threads) and C (warp threads) firmly together. It will be noticed that B and C do not interlace to form a plain weave. If crossing threads A were removed, no fabric would remain. These crossing threads in this figure are shown as always passing over the weft threads B and always under the warp threads C. This style of weave, when combined with a few "plain-weave" picks, produces Leno.



FIGURE 10.

WEFT-PILE WEAVE.

In this figure A is a weft-pile pick or flushing thread ; B is a backing or ground cloth pick ; the dots show cross section of warp threads . It will be seen that the ground picks B, together with the warp threads (shown cut through), form the foundation fabric. Pile thread A is shown bound into the fabric by the second, eighth, and fourteenth warp thread. Pile threads are cut after leaving the loom at a point indicated by the arrows ; the pile produced is then sheared level and suitably finished.

PIECE GOODS MANUAL.

Actual.—The terms “actual” and “nominal” are used in the trade to indicate (1) that the width should be taken as stated or (2) that a certain amount of allowance should be made. “Actual” implies that the width is not less than stated. “Nominal” means that the width of the cloth may vary as much as half an inch below width given on contract.

Agaric.—A cotton fabric of loop yarn construction, having a surface somewhat similar to a fine Turkish Towelling.

Albatross.—A dress fabric of worsted warp and worsted filling of open texture and fancy weaves. When the name is applied to a cotton fabric it is used to designate a plain-woven all-cotton fabric, soft, fine, and free from ornamentations, made in imitation of the worsted fabric of the same name. It has a fleecy surface, is generally sold in white, black, or solid colours, being used instead of Bunting for flags. Not often used for printing, for which purpose it is not well adapted.

Alhambra Quilt.—An all-cotton counterpane woven with a coarse waste weft known as Candlewick. A loosely woven coloured warp yarn is used for the figuring and a grey “sticking” warp for securing the weft in position.

Alpaca.—This name is given to a fabric woven with a cotton warp and an alpaca wool weft. The fabric is classed as a lustre fabric, this being due to the predominance of the lustrous weft. Generally plain woven with a simple one-over and one-under weave, Alpaca is, when solid coloured, a cross-dyed fabric, i.e., one in which the cotton warp yarns were dyed prior to weaving and the piece of fabric piece-dyed after leaving the loom. Similar to Lustre Orleans, Mohair Brilliantine, and Mohair Sicilian, which are typical lustre fabrics.

Alpaca Wool is the fleece of the Peruvian sheep, which is a species of llama. The staple is of good length and soft, but is not quite as lustrous as mohair. The natural colours are white, black, brown, and fawn.

Alpacianos.—Nothing seems to be recorded in any modern book dealing with textiles or in any technical dictionary concerning any fabric known by the name of Alpacianos. The name, however, appears in the Revised Import Tariff for the trade of China, from which it would appear to be an all-cotton fabric, piece-dyed after leaving the loom, probably averaging between 28 and 31 inches in width and about 25 yards in length. The name is probably of South American origin.

American Sheetings.—A rather coarse make of plain-woven grey cloth, woven from coarse yarns (about 20's counts), 48 threads of warp and the same number of weft picks to the inch, and generally woven with "twist way" weft. Another name for this material is Cabot. Average width, 36 inches; length, 40 yards per piece. Weight varies. The use of the name Sheeting, as applied to this class of material, is now firmly established but incorrect, Sheetings originally being a two-and-two twill fabric having a width of as much as 120 inches.

Angola.—This name is used to designate a plain or twill weave fabric having a cotton warp and a weft made from cotton and wool scribbled together prior to being spun. The proportion of wool to cotton varies. This scribbled wool and cotton yarn, or Angola Wool as it is called, generally contains about 20 per cent. of cotton and 80 per cent. of wool.

Angola Yarn or Wool.—A yarn spun from a mixture of 80 per cent. wool and 20 per cent. cotton.

Angora.—Angora is the name of a species of goat which yields a wool commercially known as Mohair. This kind of wool enters largely into the classes of goods known as Astrakhan, Crêpon, Plushes, Brilliantine, Zibelines, fine Cashmeres, and other fabrics usually sold as all wool. It enters into the manufacture of very high-grade fabrics in combination with silk. More lustrous than wool, it has not, however, the warmth-retaining properties of the latter.

Angora Goat.—A species of goat originally bred in Asia Minor producing Mohair fibre. From the long silky hair of this goat was made Turkish Yarn or Camel Yarn. The name Camel Yarn has led to mistakes; it has no reference to the camel, but is derived from the Arabic word *chamal*, fine.

Animalised Cotton.—To increase the affinity of cotton for dye-stuffs and at the same time increase its lustre, cotton is sometimes treated with solutions of wool, silk, or gelatine in such

a manner that when the solvent has evaporated the coated surface remains sufficiently pliable not to crack under normal conditions.

Armure.—A weave which produces a fine pebbled surface.

Artificial Silk.—In the making of artificial silk, cellulose prepared from wood or cotton is turned into a nitro-cellulose by treatment with nitric acid. This nitro cellulose is made liquid by dissolving it in ether and alcohol, then forced under pressure through very fine tubes, or forced through holes of about $1/250$ th of an inch pierced in a platinum plate, in the form of very fine threads, from which the ether and alcohol evaporate readily, leaving the nitro-cellulose as a fine lustrous fibre. Artificial silk is often used in the ornamentation of figured fabrics. It bears a very deceptive resemblance to true silk, but the individual fibres are coarser and burn very quickly, without the typical smell of true silk and without the hard bubble of ash. Its value is about a third of that of the best silk, but as an offset to this must be taken its higher specific gravity. If of equal thickness, the length of thread, weight for weight, is only from half to two-thirds that of real silk.

• **Astrakhan.**—A fabric having a curly, wavy surface resembling Astrakhan fleece. There are three varieties of this kind of fabric, each produced on a different principle: (1) on the weft principle, in which, owing to shrinkage of the ground texture, the pile weft is thrown up and forms a curly loop; (2) on the warp texture principle, in which a thick curly warp yarn is brought over wires to form the necessary loops; and (3) the cheapest form, as a knitted fabric.

Astrakhan varies as regards the size of the loop which goes to make the curl. The lustre yarn that is used is curled before use, the curl being fixed by heat. The ground texture is cotton. Width varies from 48 to 50 inches; weight from 19 to 36 ounces per yard of the 50-inch wide material. The heavier grades run 35 to 40 yards per piece, the lighter grades from 50 to 55 yards. Generally met with in solid black or a grey produced by blending black and white fibres, also in solid white. Astrakhans have generally an uncut pile, but are sometimes finished with part of the loop curls cut, say, 50 per cent., which gives the fabric the appearance of woolly fur with complete curls at intervals.

Back Cloth.—An unbleached, reinforcing, all-cotton cloth, plain woven, used in printing fabrics to support the fabric which is being printed.

Backed Cloth.—To add weight to certain single texture fabrics, extra threads running either in the direction of the warp, *i.e.*, lengthways of the piece, or weftways across the piece, are stitched on to the back of the fabric. Fabrics having such extra threads stitched on to them are called Backed Cloths.

Baffetas.—Plain-woven cloth, bleached or dyed blue.

Baize.—A coarse, harsh, loosely woven woollen fabric of plain weave, having a long nap on both sides like flannel. Baize is generally dyed in bright colours and is known under the name Bayetas. Average width 66 to 67 inches, length 30 to 45 yards per piece.

Balbriggan.—Named after the town of Balbriggan, Ireland. First applied, in 1845, to full-fashioned hosiery made from unbleached cotton. About 1860 the term was applied to knit underwear of the same material. It was originally used only on high-class goods, but now covers everything in light-weight flat underwear made of yarn stained to the shade of Egyptian cotton.

Bale of Cotton.—The standard bale of cotton, according to the usage of the trade in England and America and generally accepted elsewhere, weighs 500 pounds. The following is the average weight and density of cotton bales:—

	WEIGHT.	DENSITY PER CUBIC FOOT.
Egyptian	about 700 lb.	34 lb.
American	500 "	24 "
East Indian	400 "	30 "
Brazilian	250 "	20 "

Baline.—A coarse canvas, mostly made of better grades of jute, flax, and hemp, used for upholstery purposes, interlinings, tailoring purposes, etc.

Balzarine Brocades, Dyed.—The cotton variety of this class of fabric would be an all-cotton fabric having a gauze weave and 'net-like' appearance which had been embellished by the addition of certain figures or designs woven into the fabric either by means of combination of the warp and weft threads or by means of an additional thread or threads. But Lappet or Swivel figured Balzarines would not be considered Brocades in the true sense, as such style of figuring is not brocaded. Dyed Balzarine Brocades are piece-dyed after leaving the loom.

Balsarines.—Very few books of reference make mention of this kind of fabric. Of "uncertain origin," this name is said to have been given to "a light-weight mixed fabric of cotton and wool for women's dresses commonly used for summer gowns before the introduction of barège (or barrége)." Barège was, for the name seems to have fallen into disuse, "an open fabric resembling gauze, but more open in texture and stouter in thread. It was made of various materials but is best known as made of silk warp and worsted weft. It was first employed as ornament for the head, especially for sacred ceremonies, as baptism and marriage." It would appear, therefore, from the above that Balsarines—of the cotton variety—would be a gauze weave or net like fabric woven from cotton warp and cotton weft. They may have been either bleached, dyed, printed, or brocaded. The exact difference between Balsarines and other gauze fabrics does not appear in any modern works dealing with textiles. The fabric probably approximates 30 inches in width and from 28 to 30 yards in length per piece. Unless specially designated as such, Balsarines are free from brocaded ornamentation; but from the fact that they are found associated with Lenox, they may, like these, have some plain weave combined with the main gauze structure—probably running in stripes lengthways of the piece.

• **Bandanna** is a term applied to materials that have been dyed in a somewhat unusual manner, the cloth being tied in knots prior to being dipped into the dye-stuff. A peculiar clouded effect is produced, as the dye-stuff does not reach the knotted parts equally with the rest of the surface. This term is met with most frequently in connexion with a large handkerchief, of which great quantities were imported into India for sale to the natives.

Barré.—A striped or barred design, woven or printed, running from selvedge to selvedge.

Basket Cloth.—A plain-woven all-cotton fabric woven with two or more warp threads grouped together without twisting and woven as a unit of matt weave.

Batiste.—A fabric of French origin; the term has come to mean commercially a light, sheer cloth, made of fine quality of yarns and woven with a plain weave. A light fabric, with a Swiss finish, in distinction from a Nainsook, and usually wider and heavier than the latter fabric. In 32-inch widths and up a line of Batistes runs 14 to 16 square yards to the pound. There are bleached and unbleached cotton Batistes, also linen and coloured Batistes. The cotton are largely ecru, and the linen are most

commonly in the grey. There is a gradual variation in qualities ranging from a comparatively coarse to a very fine Batiste. There are also wool Batistes.

Bayadère.—Applied to fabrics in which the stripe, whether woven or printed, runs crosswise, that is, from selvedge to selvedge.

Bayetas.—The Spanish for Baize, which is a coarse, harsh, loosely woven woollen fabric having a long nap on both sides like flannel. Bayetas are generally dyed in bright colours and have an average width of 66 to 67 inches and a length of 30 to 45 yards per piece.

Beavers.—A heavy cloth manufactured of fine wool with a finish on face made to imitate the appearance of the beaver's fur. When the surface is made with a long and dense nap this fabric becomes known as Fur Beaver.

Beaverteen.—A heavy, twill-weave, all-cotton fabric of the fustian or uncut pile variety, usually dyed in shades of grey or tan and generally used for garments having to withstand rough wear.

Bedford Cords.—Fabrics having cords or ribs running in the direction of the length of the cloth, produced by interweaving the weft, in plain or twill order, with alternate groups of warp threads. The ribs may be emphasised by the addition of wadding or stuffing warp threads. Bedford Cords may be woven as either an all-cotton, all-wool, or wool and cotton fabric. The ribs of Bedford Cords are but slightly separated from each other. Cotton Bedford Cords closely resemble a wide-welt Piqué. See Welt.

Beige.—A dress fabric, generally twilled weave, made of yarns spun from wool which has been dyed in the stock prior to being spun, mostly met with in greys, browns, and mottled or mixed effects. In America the term is used to designate a dress fabric of fine texture woven from yarns in which two threads of different colours are twisted together or wherein printed yarns are employed.

Bengal Stripes.—An all-cotton plain-woven fabric of the striped Gingham variety. Warp yarns partially white, balance dyed indigo blue.

Bengaline.—A silk fabric having thick threads or cords at intervals, from selvedge to selvedge. Frequently the cord is of wool, covered with silk in the process of weaving, or cotton and

silk are combined together to produce this kind of material. When made of all cotton and known as a cotton Bengaline, it is generally mercerised. The warp yarn is often of two-ply. Bengaline has much the appearance of Poplin.

Silk or part-silk Bengalines are often treated to an embossing process, which method presses a figure upon the fabric very similar in appearance to a Jacquard woven effect. A common name for Reps, also similar to Poplin, but generally of a heavier corded appearance with the cord running transversely across the face of the fabric.

Binding Cloth.—A muslin dyed and stamped or embossed, used to cover books by bookbinders.

Bleached.—This term is used to designate either raw cotton, cotton yarn, or more often cotton fabrics which have been rendered white. The most generally used agent for bleaching is chloride of lime. The process of bleaching varies according to whether the fibres being bleached are in the loose, the yarn, or the woven state. Prior to being bleached fabrics are said to be in the "grey"; after bleaching they are said to be "white."

Bleached Domestics.—A term commonly used referring to the cheaper grades of bleached cotton cloths, either plain or twilled.

Bombazine.—Bombazine is the name given to a twilled fabric of which the warp is of silk and the filling is worsted.

Book-fold Muslin.—A trade designation meaning muslin put up in 24-yard lengths, folded in such a way as to open book-wise from the centre, the various folds resembling the leaves of a book.

Botany.—A term applied to worsted yarns made from Botany wool. It is considered the finest of all worsted yarns and is used for making fine fabrics of close texture. The name Botany is commonly used to designate a fine grade of Australian wool.

Bouclé.—Having knots, loops, or curls on the surface; usually employed for cloakings. Imitation Astrakhan is a type of the kind of fabric coming under the heading Bouclé.

Bourette.—A rough-surfaced effect produced by introducing lumpy, knotted yarns at intervals in the weaving.

Broadcloth.—Broadcloth is a soft, closely woven material made with an all-wool warp and filling having a satin finish. The beauty of Broadcloth depends on its even, nappy, lustrous surface. The three main points that go towards fixing its value are the quality of the wool used, the uniformity of the nap, and the perfection of finish. It is most often twill woven, double plain, but it is also met with in a plain weave.

Brocade.—The ordinary cotton Brocade is a figured fabric of single texture. More elaborate Brocades, used for dress and upholstery purposes, may have several wefts, in which case the cloth is one-sided, the warp forming the ground on the face, and the wefts appearing only where required to produce figure. Soft-spun wefts are often used in Brocades and similar kinds of cloths, the better to fill and throw up the figure used in their ornamentation. It is a term commonly applied to fabrics of different weaves or combinations of weaves in which the design appearing on the surface of the fabric is of a fancy figured or floral effect, usually of elaborate design; also used as an adjective to denote "woven figured."

Brocatelle.—The real Brocatelle is a rich upholstery fabric, which has a raised figure of silk warp and weft interwoven in satin order, on a ground formed by a linen weft and a special binder warp. The name is also applied to quilts having a coarse white weft and two colours of warp, which latter change places for figuring purposes.

Broché.—The French term for Brocade. Elaborate figures woven on the surface of the fabric.

Brown Sheetting.—This term is the equivalent of "plain grey cloths" and covers all weights of cotton goods in the grey or unfinished condition.

Brown Shirting.—The term is restricted usually to mean such grey cotton cloths as have a width of 40 inches or less from selvedge to selvedge.

Bugis.—This name is given to a fine make of cotton sarong having only one side decorated with a border design. It is used by sewing two pieces together plain edge to plain edge, thus converting it into a sarong with both edges ornamented.

"Bump" Yarns.—Cotton yarns of coarse numbers below 3's, used for weft purposes in counterpanes and other coarse fabrics, are termed "Bump" Yarns. Sometimes the term Candlewick is used for very coarse counts. The counts in the case of "Bump" Yarns are denoted by the number of yards weighing 1 ounce.

This kind of weft is extensively used for coarse and heavy goods, such as bagging, Alhambra quilts, etc.

Example.—A yarn weighing 60 yards to the ounce would be termed 60's "Bump."

Bunting.—A plain, loose, even thread weave of Mohair wool or worsted, used mostly for making flags. Bunting, which is a material having to be dyed, is made of wool and not cotton or other vegetable fibre for the reason that wool has a greater affinity for dye-stuffs than cotton and retains them better. There is, however, a cotton fabric woven from low count yarns, generally known as either Butter Muslin or Cheese Cloth, which is sometimes called Bunting.

Burlaps.—A plain-woven, coarse, and heavy fabric made from jute, flax, or hemp, used for wrappings, upholstery, etc.

Butcher's Linen.—A coarse, heavy, plain-weave linen.

Cabled Yarns.—Cabled Yarns are produced by folding together "two-fold" threads. Under the heading "Folded Yarn" it will be seen that when two single threads of 60's count yarn are twisted together they produce a two-fold 60's, written thus: 2/60. When three such two-fold yarns are twisted together they produce a six-fold 60's thread. Sewing cottons, known in the trade as Spool Cotton, are good examples of Cabled Yarns.

Cabot.—A Levant term for a rather coarse make of plain grey cloth, woven from coarse yarns (about 20's counts); 48 warp threads and the same number of picks to the inch.

Lancashire-made Cabots are usually heavily sized. Considerable quantities of this cloth are made in South Carolina mills in 36-inch width and shipped to China under the name of American Sheetings.

Calico.—This name is used to designate most plain-woven cotton fabrics which have simple designs printed on their face in either one or more colours. Calicoes are usually in two colours, that is, one colour for the ground and the other for the figure or design. The ground colour is generally effected by piece-dyeing the fabric in some solid colour. After the cloth is dyed the design

is printed on the cloth. Being cheap fabrics, Calicoes are generally given a "cheap common dye"—by this is meant that the colours are not fast and will run or fade when washed. The printing of Calicoes is done by the aid of a machine whose main feature is a revolving cylinder on which the design has been stamped or cut out. Such machines are capable of printing several colours in one design. Calico is woven with a plain one-over and one-under weave. As a textile term it is applied to cheaper grades of plain cotton cloth, and the name is rightly applied when such cloths are printed. In the Manchester district and in Great Britain generally the term Calico is used only to designate a plain grey or white shirting or sheeting free from any ornamentation.

Camel's Hair.—A loosely woven fabric of long-fibre wool. The term in its original sense is used to describe the soft downy fibre from the haunches and under parts of the camel.

Camlets (Woollen).—An all-wool plain-woven fabric free from any ornamentation of weave produced either by combination of weave or extra warp or weft threads. It is invariably woven with the plain one-over and one-under weave from worsted yarns, which make the fabric somewhat lustrous. In width averaging 30 to 31 inches and in length 60 to 61 yards. Camlets are only divisible into two kinds, Dutch and English. The former variety appears to be no longer made, and one manufacturer states that practically 99 per cent. of the Camlets imported into China are of the English variety. Not unlike an Alpaca in feel, though somewhat less lustrous, Camlets may be compared to a very fine wool Bunting.

Camlets, Dutch (Woollen).—This heading apparently covers a type of material which has almost disappeared from the market. Originally a rough cloth made from camel's hair, it was known as either Camlet or Camelot. A somewhat ancient description is "a rough fabric composed of wool and cotton, or hair and silk with a wavy or variegated surface." A firm of manufacturers in Bradford, written to for information under this heading, writes as follows: "This is a very ancient heading, and Camlets now are only made in this country, and although there are about three qualities shipped to China, practically speaking, 99 per cent. are in the quality of the sample shown." The sample in question shows the fabric to be a plain, all-wool, fairly loosely plain-woven fabric dyed a bright vermilion. Both warp and weft are of worsted yarn and hence it is a somewhat lustrous fabric; in width it averages between 30 and 31 inches, in length from 60 to 61 yards, and its average value during the 10 years 1904-14 was 40s. 5d. per piece. Camlet somewhat resembles a fine Bunting and has a harsh handle; somewhat stiff, it has the feel of an Alpaca fabric.

Camlets, English (Woollen).—This fabric is described under Camlets, Dutch. A typical sample of English-made Woollen Camlets showed the fabric to be a plain, all-wool, fairly loosely plain-woven fabric dyed a bright vermillion. Both warp and weft are of worsted yarn, and hence it is a somewhat lustrous fabric, averaging 30 to 31 inches in width and 60 to 61 yards in length. Average value of the quality generally imported into China was for the 10 years 1904 14 4os. 5d. per piece. Somewhat harsh of handle, it resembles a fine Bunting with the stiff feel of an Alpaca.

The earliest mention of English Camlets is to be found in Camden's "Brittania," 1610, where, speaking of Coventry, it is said: "Its wealth, arising in the last age from the woollen and camblet manufacture, made it the only mart of this part." In the next century those of Brussels are said to exceed all other Camlets for beauty and quality, those of England being reputed second.

Caniche.—Name given to a curled wool fabric showing the effect of the coat of the *caniche*, or French poodle.

Canton Flannel.—This term is used to designate an all-cotton flannel, first made for and exported to Canton. Canton Flannel will be found more fully described under "Cotton Flannel." It is a narrow heavy fabric, twill woven, showing twill on one side and having a long, soft, raised nap on the other. Woven as a four-shaft twill for winter weights and as a three-shaft twill for the summer weight. Width from 27 to 30 inches. Canton Flannel is taken direct from the loom, measured, napped, and folded, and packed for shipment. The yarn used to make this class of cloth is spun from low-grade cotton of from three-fourths to 1 inch in length of staple, generally dyed in bright colours.

Canvas.—Canvas is a coarse plain-weave fabric woven from yarn which is hard twisted. It is often woven from folded yarn, and this may readily be seen in what is known as embroidery canvas. Canvas used for sails is generally a stout strong-built cloth woven with "double warp coarse flax yarns." A term applied to heavy, plain, unbleached, dyed or yarn-dyed fabric, of different grades or weights properly made of ply yarns, although the term more frequently applies to fabrics of such similar appearance made without or partially of ply yarn. Various sorts of Canvases are known in different trades, such as Embroidery Canvas, Duck, Dress Canvas, Mercerised Canvas, etc. Dress fabrics, the principal part of which are of such a construction, are still termed Canvas in the distributing trade when they contain stripes or fancy effects of other weaves.

Carbonising.—All-wool cloths and even raw wool very often contain a certain amount of vegetable matter, such as burrs, the chemical composition of which is similar to that of cotton, and as it is at times very desirable to extract this vegetable matter, the cloth or fibre is for this purpose subjected to a process known as carbonising. The material is passed through a bath containing sulphuric acid of a suitable strength and temperature. Upon drying, the acid concentrates upon the vegetable matter, converting it into hydrocellulose, which, being in the form of a powder, is easily removed, while the wool, not being acted upon by the acid to any considerable extent, remains intact. This system would be employed to test the percentage of cotton in any union fabric: by carefully weighing the sample prior to treatment and again after all the vegetable matter had been carbonised the proportion of cotton to wool can readily be ascertained.

Casement Cloth.—A plain-woven fabric used for casement window curtains and usually white or cream-coloured. Casement Cloth is made from either mohair, alpaca, or cotton. The cotton variety is made from high-class yarns, well woven, and is mercerised before bleaching or dyeing.

Cashmere.—A cloth made from the hair of the Cashmere goat. The face of the fabric is twilled, the twills or diagonal lines being uneven and irregular owing to the unevenness of the yarn. Cashmere was originally made from hand-spun yarn. In the knitted goods trade the word Cashmere, when applied to hosiery or underwear, means goods made of fine worsted yarns spun from Saxony or other soft wools.

Cashmere has been described as being a lightly woven woollen fabric of twilled construction and soft finish, having the twill on the "right" side, *i.e.*, on the face of the fabric. It is sometimes woven with a cotton warp and fine Botany wool weft. An all-cotton variety, woven in the same way as the true Cashmere, is also met with: it is known as Cotton Cashmere.

Cashmere Double.—A Cashmere cloth having as a distinctive feature a twill face and a Poplin-corded effect on the reverse.

Cashmere Wool is the fine, extremely soft, grey or white fur of the Cashmere goat, which is bred in Tibet. There are two kinds of fibre obtained: one, which is really the outer covering, consisting of long tufts of hair, beneath which is found the other, the true Cashmere Wool of commerce, a soft downy wool of brownish grey tint having a fine silky fibre.

Castor.—A heavy cloth, manufactured of fine wool with a finish on the face made to imitate the fur of the beaver. This cloth differs from Beaver Cloth only in its weight, Castor cloth being lighter than Beaver.

Cellular Cloth.—A plain Leno fabric having an open cellular structure, which is specially suited for shirtings and underwear. Cellular Cloth is also found with stripes of different weave, though still a form of Leno weave to the rest of the fabric.

Ceylon or Ceylon Flannel.—A coloured striped cloth woven with a cotton and wool mixture weft. The warp threads which form the stripes are dyed in the yarn prior to weaving.

Challis.—The name is given to a light-weight plain or figured material made either of cotton or wool or a mixture of both. An all-wool Challis has, when plain woven, the appearance of a Muslin Delaine. Usually printed.

Chambray.—Chambray is a staple fabric of many years standing, being next in line of the cotton goods after the better grades of Gingham. It is a light-weight single cloth fabric, always woven with a plain weave and a white selvedge. It is woven from warp and weft which may be either all cotton, cotton and silk, or all silk: it has an average width of 27 or 30 inches and weighs 2 to 3½ ounces per finished yard. When made as an all-cotton fabric it is finished in the same way as a Gingham.

Charmeuse.—A light-weight satin having a high natural lustre.

Checks.—Fabrics having rectangular patterns formed by crossing the threads of a striped warp with weft threads of the same order. "Mock" Checks are produced by combining weave effects.

When Checks are woven without a highly variegated colouring they are known as Ginghams.

Cheese Cloth.—A very open and tightly constructed thin cotton fabric of light weight and low-count yarns, woven with a plain weave, weighing from 9 to 12 yards to the pound. Cheese Cloth is often used for Bunting, by which name it is sometimes known. The Cheese Cloth used for wrapping round cheese and butter after they have been pressed is a bleached cloth.

Cheviot.—Most stout woollen fabrics which have a rough or shaggy face are described as Cheviots, which has become a term denoting more a class of goods than a particular fabric. It has a slightly felted, short, even nap on the face, and is often made of "pulled wool," which is the wool taken from the pelts of dead sheep.

Mungo, shoddy, and a fair percentage of cotton enter into the composition of the yarn from which it is made. Irrespective of the quality of the yarn used, however, Cheviots are finished either with a "rough" or a close finish. The weave may either be plain or twill.

Chiffon.—A sheer silk tissue of plain weave and soft finish. The word is often used to indicate light weight and soft finish, as Chiffon Velvet.

Chinchilla.—A fabric made of fine wool, having a surface composed of small tufts closely united. The name is Spanish for a fur-bearing animal of the mink species, and the fabric is an imitation of the fur.

Chiné.—Warp-printed: a fabric wherein the design, being printed on the warps, appears somewhat faintly and in indefinite outline. The weft is not printed, but is generally in the white. Some varieties, occasionally met with, have a coloured weft. This class of fabric is also known as a Shadow Cretonne, when the designs are of the variety generally used in Cretonne fabrics.

Chintz.—When this name is applied to a fabric other than a printed Chintz it is used to designate a woven Chintz, which is a fabric on the warp threads of which, before being woven into cloth, various coloured designs have been printed. Many silk ribbons are Chintz woven. Where the colours seem to have run in the pattern the name Chene is sometimes used. Warp-printed Chintz is also known as Shadow Cretonne, from the softness of the design due to the white weft blurring the sharpness of the design printed on the warp.

Clip Spots.—Figured Muslins ornamented by small detached figures of extra warp or weft, the floating material between the spots being afterwards clipped or sheared off.

Coated Cotton Cloths.—This name is given to a cloth having one or both surfaces coated with paint, varnish, pigments, or other substances. Examples of coated cloths are Tracing Cloth, Bookbinder's Cloth, Imitation Velum, Oilcloths, and Oilskins.

Collarette.—A wide knitted neckband used on men's undershirts in lieu of binding.

Coloured.—This term, when applied to textile fabrics, is used to show that the fabric which is designated as "coloured" has been dyed in the yarn and not dyed subsequently to having been woven, i.e., it has been woven from coloured yarns.

Coloured Crimp Cloth.—Like all other fabrics that are designated as "coloured," Coloured Crimp Cloth is dyed in the yarn and not piece-dyed. Coloured Crimp Cloth is essentially a Crimp Cloth which has been woven from previously dyed yarn; apart from this difference it answers the description given under Crimp Cloth, Plain or Crimps.

Coloured Lists.—All serges, etc., that are dyed in the wool or yarn, as against those dyed in the piece, have coloured lists or edging. The word "list" is another name for selvage.

Coloured Woollen and Worsted Yarns.—The most important coloured woollen and worsted yarns are: (a.) Mixtures, (b.) *Mélanges*, (c.) Marls, and (d.) Twists.

(a.) *Mixtures.*—A mixture yarn is one composed of fibres of two or more colours which have been thoroughly blended. In woollens the wool is dyed after scouring and the mixing accomplished during the carding process.

(b.) *Mélange.*—This is a fine mixture yarn produced from a top-printed sliver. The result is obtained by printing at regular intervals the required colours on the top of the sliver. The mixing of the fibres and colours is brought about during the drawing and spinning processes. As a rule only long fibres such as Mohair are subjected to this method of treatment. In these yarns, on many fibres two or more colours may be clearly seen under the microscope.

(c.) *Marls.*—A term sometimes applied to three-fold twist yarns, but more correctly applied to a yarn which is between a twist and the mixture yarn. It is produced by combing two or more slivers of different colour in the later drawing operations, and in consequence the colours are not so thoroughly blended as in the case of mixture yarns.

(d.) *Twists.*—This class of yarn is produced by simply twisting or folding together two or more yarns of different colours.

Corduroy.—Corduroy, like many other low grade cotton fabrics woven with a pile weave, such as Cotton Velvet, Velveteens, Moleskins, is really a Fustian. The pile surface of

Corduroys does not cover the surface of the fabric uniformly, as in the case of Velveteens, for instance, but runs in straight lines or ribs, which may be of different sizes and have round or flat tops. When a Corduroy has a twill back it is known as a "Genoa" backed Corduroy; when, as in the lighter makes, the back shows a plain weave it is known as "Tabby" backed.

Corduroy is a cotton fabric with the ribs running lengthways of the piece. The pile is a weft pile. Corduroys are made in many varieties—known as Fine Reed, Eight Shafts, Thicksets, Constitution, Cables, etc. Constitution and Cables have broad floats or races which are some distance apart. The term Corduroy, when applied to hosiery, is used to designate stockings which are commonly known as two-and-two rib, or two ribs alternating on face and back of children's stockings.

Côtelé.—A ribbed weave in flat, rather wide effect.

Cotton.—Cotton is the most used of all vegetable fibres for the manufacture of textiles. Length and fineness of individual fibres go towards making quality; shortness and coarseness of fibre make for low qualities.

The chief classes of cotton are known as Sea Island, Egyptian, American, Brazilian, Peruvian, East Indian, the first mentioned being the highest and the last the lowest quality. Qualities are designated in each class as follows:—

- | | |
|-------------------|-------------------|
| 1. Fair. | 5. Low Middling. |
| 2. Middling Fair. | 6. Good Ordinary. |
| 3. Good Middling. | 7. Ordinary. |
| 4. Middling. | |

East Indian type of cotton fibres measure on an average but half an inch, as compared with 2 inches in Sea Island type.

Cotton Duck.—Duck being a fabric which is sometimes woven in linen, to refer to it simply as Duck might be misleading; hence, although when used by itself the term Duck is generally recognised to mean a cotton fabric, to differentiate between the two the word Cotton or Linen is used. This fabric is described under "Duck."

Cotton Flannel.—As the name implies, Cotton Flannel is a material woven in cotton in imitation of the real all-wool flannel. It is either a plain or a twill woven fabric which has had the weft on one or both sides of the fabric "raised" or "napped." This is done by passing the fabric, whilst it is tightly stretched, over a revolving cylinder, the surface of which is covered with small steel hooks or teasels; these, scratching as they do the surface of the fabric, tear up very slightly the short fibres and cover the fabric

with a "nap," which is afterwards cut down uniformly. Cotton Flannel was first made for the Canton market. Cotton Flannels may be either "single raised" or "double raised"; in the first only one side of the fabric is raised, in the second both sides are raised. Whilst Cotton Flannel clearly shows that the fabric is a cotton one, the term Flannelette does not necessarily mean that it is a purely cotton fabric identical with Cotton Flannel. Flannelette may contain wool, even if only in very small percentage, but by trade usage the name is used to designate only an all-cotton fabric.

Cotton Plush.—The term Plush being a generic term applied to cut-pile fabrics having the pile deeper than ordinary Velvet, Velveteen, etc., it follows that Cotton Plush is essentially a cotton-pile fabric with a somewhat deeper pile than Velveteen. Cotton Plushes may be woven with either plain or twill back, the plain-backed variety being known as a "Genoa" Plush and the twill-backed variety as a "Tabby" Plush.

• **Cotton Yarn Measures.**—

- 54 inches 1 thread (or circumference of wrap reel)
- 4,320 .. = 80 threads 1 lea.
- 30,240 .. 560 .. = 7 lea 1 hank.
- 1 hank = 840 yards.
- 1 bundle is usually 10 lb. in weight.

The French system of numbering Cotton Yarns is as follows:—

1,000 metres weighing	500 grammes	No. 1's.
1,000	250 ..	No. 2's.
1,000	50 ..	No. 10's.
1,000	25 ..	No. 20's.

The count is therefore arrived at by dividing the number of metres reeled by twice the number of grammes they weigh.

Counts.—The size of yarn is technically called the "count," and it is based upon the number of hanks, "cuts," or "runs" of a given length which are required to weigh 1 pound. The standard length of the hank varies according to the nature of the yarn. Cotton Yarn measures 840 yards per hank; Worsted Yarn measures 560 yards per hank; Woollen Yarn measures 256 or 300 yards per "cut," "run," or hank, according to district; Linen measures 600 yards per lea; and Spun Silk, 840 yards per hank. The number of such "cuts," "runs," hanks, or leas required to weigh 1 pound avoirdupois equal the number of the count. When Woollen Yarn is in gale cuts of 300 yards the number of such cuts required to weigh 24 ounces equal the count: this becomes equivalent to the number of 200 yards required to weigh 1 pound.

Coutil.—French for Drill. A strong three-thread twill cloth with herring-bone stripes dyed drab or French grey and used for corset-making.

Covert.—A wool or worsted cloth, usually in fine twill weave, in small mixture effect. There are various grades of Coverts and they all have as a distinctive feature neutral tones of colour. The real Covert cloth is always made from double and twist warp yarns and single fillings. The weave is such that the filling yarn does not show on the face of the cloth, therefore almost any shade similar in general tone to the warp may be used as filling. Cheap grades are made as a piece-dyed union mixture containing up to 30 per cent. cotton. They are also known as Venetian Coverts when they have a pronounced whipcord effect. The weave is a sateen weave of the warp-face variety.

Crabbing.—One of the many processes through which cloth goes from the time it leaves the loom on its way to being turned out as a finished fabric. The object of crabbing is to fix or set the cloth at the width it has to be as a finished fabric. The actual operation of crabbing consists of running the cloth at a tension on to a steaming or boiling roller. The axle or core of the roller is hollow and perforated; the cloth having been tightly wound round, steam is forced through the perforations and right through the mass of tightly wound cloth. The superheated steam sets the cloth.

Crape Cloth, Plain.—Plain Crape Cloth is an all-cotton fabric, plain woven from hard-twisted cotton yarns and is free from any woven or printed ornamentation. The nature of the hard-twisted yarn is such that it readily shrinks or curls in length when not kept at a high tension; this, together with subsequent finishing operations, causes a considerable contraction to take place, resulting in an uneven crinkled surface, which is the chief characteristic of Crape. The crinkled surface in true Crape is obtained in several ways: (1) by combination of materials; (2) by weave combination; (3) by combination of (1) and (2); (4) by mechanical arrangements during weaving; (5) by subjecting fabrics specially constructed to a special chemical process during finishing. The cheaper grades of Crape have the crinkled effect produced by suitably prepared rollers through which the cloth is passed, and the crinkled effect in cotton Crapes is not always the result of true Crape weaving, which relies on the irregularity of the interweaving of threads to produce the Crape effect. In width Crape seldom exceeds 30 inches, but is made up in pieces of varying length.

The name is also applied to a thin, transparent, "crisp" or crumpled silk material, usually black, which is used in mourning, as well as to a sort of thin worsted material of which the dress of the clergy is sometimes made.

Crash.—A coarse plain-weave linen material in which the unevenness of the weft yarns gives a rough surface to the cloth. There are various grades of Crash, of which the coarser and more irregular kinds are used for towelling, whilst the finer are dress materials. Some Crash fabrics are woven from waste cotton.

Cravenette.—A waterproofing process applied to fabrics made of silk, wool, or cotton. Not a fabric.

Crêpe de Chine. A sheer silk having a minute crêpe effect in the weave. The name in its correct acceptance applies to an all-silk fabric, but there are also cotton and silk mixed fabrics which bear this name, and at times even all-cotton fabrics have been so designated by the retailer, at least. All the materials which are known by this name are of comparatively light weight. In practically all these fabrics the lustre is imparted by the warp yarns, which are likely to be of better silk than the filling. The filling yarns are twisted harder than for ordinary cloth. The hard twisting of any yarn will so curl up the fibres that they will not lie parallel and so will not reflect light and give lustre. All-silk Crêpe de Chine fabrics have a width of about 40 inches, whilst all-cotton and cotton and silk mixtures average 27 inches in width. The all-cotton variety is most often simply designated as Crêpe.

Crêpe Meteor.—A lustrous silk Crêpe.

Crepoline.—A fabric of a warp rib character in which the regular order of the weave is so broken as to give a "rib crêpe" effect.

Crépon.—A dress fabric of silk or wool in which the design is produced by using yarns having a different degree of stretch, so that portions of the fabric are crisp, wrinkled, or apparently blistered, either irregularly or in set designs.

Cretonne.—This fabric is essentially a printed cotton fabric woven either with a plain twill satin or oatmeal weave. The weft is generally made from waste and is not very regular. Cretonnes, being used mainly for curtains, hangings, or furniture coverings, are generally printed with large, bold, and highly coloured designs. It is woven with a bleached or grey cotton warp and filling in widths ranging from 25 to 36 inches, and for curtains in widths

up to 50 inches. Their main feature is their large bright-coloured floral designs, and their value depends to a great extent upon the artistic merits of these designs. Sometimes a fancy weave or small brocaded effect may occur in this class of fabric, but it is seldom met with, and it is not representative of the true Cretonne fabric. Flax also is said to be used in the manufacture of certain grades of Cretonnes, without, however, taking them out of the class to which Cretonne fabrics belong.

Crimp Cloth, Plain, or Crimps.—Crimps are plain-woven all-cotton fabrics which have as their distinctive feature "cockled" striped effects. These "crimped" or "cockled" stripes are produced by dividing the warp threads into two separate "beams," one of which is under greater tension than the other; that is to say, the warp threads from one of the beams will be tight and the others slack. These slack threads in the process of weaving are "taken up" more rapidly and form the "crimped" stripes. Crimps may also be produced by subjecting fabrics specially constructed to a special chemical process during finishing, or by passing the material through suitable rollers which will stretch the material in some places more than in others and thus artificially produce the "cockled" stripe. Crimps are made up in widths seldom exceeding 30 inches; the length of pieces, however, may vary considerably. It is also known as Seersucker or Crinkle.

Crinkle, or Seersucker.—Names given to striped fabrics of the Crimp type. Seersucker originally meant a silk fabric.

Cross-dyed.—Cross-dyed goods may be described as fabrics woven with black or coloured cotton warps and wool or worsted fillings and afterwards dyed in the piece. This process is resorted to because the warp and filling of a fabric woven with a cotton warp and a wool filling, and then piece-dyed, would not become identical in colour, as cotton and wool have not the same attraction for dye. Cross-dyeing is generally used in mohair, alpaca, and lustre fabrics, and the principal cloths in this classification are cotton warp figured Melroses, Florentines, Glacés, Brilliantines, Lustres, Alpucas, and Mohairs. See Union Cloth.

Crossover.—This name is given to fabrics having stripes, of either colour or weave effect, extending across the width of the cloth from selvedge to selvedge.

Cut Goods.—Underwear made of either ribbed or flat webbing knitted into long rolls and cut to the proper lengths and sections for garments, after which the various parts are sewed together.

Cuttling.—Plaiting cloth in folds; used in the same sense as lapping and folding, as opposed to rolling into bolts.

Damask.—The name Damask is technically applied to certain classes of fabrics richly decorated with figures of foliage, fruits, scrolls, and other ornamental patterns, usually of a large and elaborate character. The weaves usually employed are twills (mostly satin twills), and the figures in the fabric are made by alternately exchanging warp for weft surface or *vice versa*. The materials employed vary according to the purpose to which the fabrics are to be applied. In the manufacture of upholstery cloth for hangings and furniture covering, silk or worsted is used; while for table covers, towels, napkins, etc., linen is generally employed, except in the cheapest grades, when cotton is the material used. Damask was originally applied only to silken fabrics whose designs were very elaborately woven in colours and often with either gold or silver threads. Although in the majority of Damask fabrics nothing but satin twill weaves are employed (principally five and eight shaft), very good effects are obtained by combining other weaves with satin twills. Where Damasks are made all of one colour, as in white linen table covers, the effect is given by the threads lying at right angles to each other; the light falling upon them brings the pattern in bold relief and makes it easily visible.

• **Damassé.**—Applied to fabrics having a rich woven design. Similar to Damask.

Delaine.—A term applied to plain-woven materials made "of wool." The term probably originated in France and was applied there to all plain-woven fabrics of light weight made of wool. As used at present, the term may be combined with another name, and then purely designates the nature of the material used in the manufacture of the fabric, such as in *Muslin Delaine*.

Denim.—A stout cotton warp-faced twill cloth, generally woven as a four-end twill. The warp is dyed either blue or brown before weaving, whilst the weft is grey; they are both of coarse counts. Denim, being a warp-faced material, has the warp on the surface; and as the warp is made of coloured yarns, the cloth when woven shows a solid coloured surface. The back of the fabric shows the bulk of the weft threads, and these, being in the grey, give the back of the cloth a distinctive lighter colour than the face of the cloth. Like all warp-faced twill weave, the back of the cloth shows a plain-weave effect. Denims have generally a white edging forming the selvedge, they range from medium to heavy weight and are largely used in the manufacture of workmen's overalls.

Derby Rib.—Applied to hosiery having six ribs on the face alternating with three on the back.

Diagonal.—This name is applied to plain or figured twills, of bold character and originates in the twill effect, which, in relation to the length of the fabric, runs in a diagonal direction. This twill effect is produced by raising warp threads in groups in a progressive order, the filling thus making them stand out in ridges or heavy twill.

Diaper.—This term as applied to fabrics is used to describe two distinct styles, the first of which consists of a small diamond weave, while the second and true Diaper has rectangular figures or dice interwoven on the Damask principle. In cotton fabrics it is confined to diced or diamond reversible patterns on a small scale. The weave is produced by the interchanging of warp and weft. In linen fabrics, also, it is used to produce diced, diamond, and bird's-eye patterns, and also small reversible Damask patterns. In some districts the names Dorneck and Diced are used instead of Diaper.

Dimity.—A fine cotton fabric, plain or printed, having a cord design running lengthways of the piece. The figures are often arranged in alternate stripes and appear as if embossed, this effect being due to the coarse weft "flushes." A cheaper kind is sometimes made by arranging a reversed woven stripe of warp-face and weft-face twill on a plain ground texture.

Discharge Printing.—In what is known as the "discharge" style of printing, the cloth is first impregnated throughout its whole substance by being either vat-dyed or pad-dyed; then the cloth is dried, but the colour is not fixed. It is next passed through the printing machine, and chemicals having the property of preventing the development are printed on it, either alone or in combination with other colouring matters. The ground colour is then developed by steaming, and the printed pattern, white or coloured, is obtained upon a coloured ground.

Dobbie, or Dobby.—This name is used to describe a type of loom used for the production of certain classes of figured fabrics which have a great many points of similarity with fabrics produced by means of a Jacquard loom. The distinctive feature of a Dobby loom is the series of lattices into which pegs are inserted, which control the lifting of heald shafts in their proper order, so as to form the shed, the heald shafts being pulled down again by means of springs after having been lifted up to form a shed.

Domestics.—This term is used in the textile producing districts of Great Britain to denote a class of medium and heavy weight grey cloths, plain or twill woven, the better qualities of which are not exported but used for home or domestic consumption.

Domet.—A strong, heavy, twill-woven cotton fabric resembling Canton or Cotton Flannel, having a raised or napped surface on both sides of the fabric. Domet may be either in the grey or white and is a plain fabric.

Double Cloth Weave.—Where two single cloths are so woven that they are combined together and make but one, it becomes known as a Double Cloth and is the result of double-cloth weaving.

Double Cloth is woven either to obtain two well-defined and finished faces or to allow of a heavy material being made with a good quality face and with the back made up of a cloth composed of inferior material. This style of weaving is resorted to when the object is to produce certain kinds of bulky or heavy over coating.

Double Sole, Heel, and Toe means an extra thread added to hosiery at points mentioned. Strictly speaking, "double" applies only to single-thread goods.

Double Warps.—The name double warp is used to designate various kinds of fabrics of good quality in which the warp threads consist of two-fold yarn. Not to be mistaken as designating two-ply or double-weave fabrics.

Drap d'Été.—Allied to Cashmere in weave, but heavier.

Dresden.—A small unobtrusive design in pastel colourings.

Drills.—Drills are strong, heavy, warp-faced fabrics woven from yarns of good quality with a three (two warp and one weft), four (three warp and one weft), or five (four warp and one weft) end twill weave. When so woven they are known as Florentine Drills, of which the khaki Drill so often met with in the Colonies is a good example. Drills are also woven with a warp sateen weave which have—as the twill effect is done away with—a smooth surface.

Drills may be either linen or cotton fabrics, grey or white, bleached or dyed, printed or striped. They average 40 yards in length per piece and vary in weight from under 10 to 12½ pounds

or over per piece and 31 inches in width. The name is from the Latin *triles*, of three threads, and is applied to a "three-thread twilled cloth." Cotton Drill is a medium weight single cloth weighing from 4 to 6 ounces and composed of all-cotton yarns, warp, and filling, and is generally woven as a three-end twill-weave fabric.

Drillette.—This is a cotton fabric, finer and lighter in make than the ordinary cotton Drill. Drillette of 30-inch width is imported into Colonial markets, where it is largely used for linings and pocketing.

Duchesse.—A satin fabric having the back woven in flat, twills, with a smooth surface.

Duck.—Duck is a heavy single-cloth cotton fabric made of coarse two-ply yarn of plain weave. Lighter than Canvas, Duck is woven on the same principle as Canvas. Duck on leaving the loom is finished by washing and sizing, drying and pressing; this gives the finished material a peculiar, hard, stiff feel. There are linen Ducks, but they are specially designated as Linen Ducks, the term Duck being used to denote the cotton variety.

Better qualities of Duck, such as are used for tropical suitings, are woven with a two-and-two matt dice or Hopsack weave. The term "two-and-two" means that two weft threads pass alternately under and over two warp threads, exactly as if a plain weave had been doubled and the weave worked with two threads instead of one; the plain weave is often termed a one-and-one weave. See Cotton Duck.

Dungaree.—A stout cotton warp-faced twill cloth woven as a four-end twill from coarse-count warp and weft. The only difference between this fabric and a Denim is that in the latter the weft is grey, whereas in a Dungaree both the warp and the weft have been dyed prior to weaving. Dungaree, being a warp-faced material, has the warp on the surface, and as both warp and weft are dyed yarns, the cloth, when woven, shows a solid coloured surface.

Duplex Prints.—Fabrics which have one set of patterns printed on the face of the cloth and another different pattern or design printed on the reverse side are generally styled Duplex Prints. They differ from fabrics which have been printed in colour on one face, but in such a manner that the printed pattern has soaked through and shows—though less sharply—on the back of the fabric. The Duplex Print is the result of two distinct printing operations, first on one side, then on the

other side, of a fabric. This being the essential condition for a Duplex Print it follows that the two patterns need not be different. Fabrics printed on one side only, but in such a way that the design shows equally or nearly so on both sides, are not Duplex Prints.

Dyeing.—This term is used to describe the colouring of materials to enhance their value and appearance. There are five methods of producing colour in the fabric —

- | | |
|-------------------------|------------------|
| 1. Raw material dyeing. | 4. Mixed dyeing. |
| 2. Yarn dyeing. | 5. Piece dyeing. |
| 3. Cross dyeing | |

•Unless the process is specially mentioned when a fabric is spoken of as “dyed,” it can be taken that what is meant is that the fabric was “piece-dyed,” i.e., dyed in the piece after being taken off the loom. A dyed fabric is one which has been impregnated with some colouring matter and this irrespective of the means adopted to so impregnate it. Whether the fabric once woven has been allowed to —

1. Remain in a dyo vat soaking up dye, or
2. Whether it has been drawn through a series of troughs containing dye (Continuous or Pad dyeing process) with a view to its absorbing the dye —

is immaterial. Where both sides of a fabric are equally coloured, and where a fabric shows that there has been thorough saturation, that fabric is said to be dyed.

Dyed and Printed.—This term is used to designate any fabric which has been first impregnated with colouring matter either by being vat-dyed or pad-dyed, and which in addition has been ornamented by having certain designs impressed on the surface of the fabric in either one or more colours. This is known as direct printing. Fabrics may be dyed and printed by various styles of printing, such as “Discharge” which consists of printing chemicals upon dyed fabrics in designs, the chemicals causing the dye to come out wherever applied, leaving the printed design either white or in a different colour from that of the dyed ground. “Resist” or “Reserve” style of printing is a process used to obtain white figures on a coloured ground. In this process the designs are printed in substances that are impervious to the dye into which the cloth is subsequently placed. The cloth is dyed, but all parts covered by the resist agent remain white.

Dyed Alpicianos.—This fabric is found grouped in the Revised Import Tariff for the Trade of China under “Dyed Cottons.”

Alpacamos, as the name of a fabric, seems to have fallen into disuse and is probably a very old name. Dyed Alpacamos would appear to be an all-cotton fabric piece-dyed after leaving the loom, probably averaging between 25 and 31 inches in width and about 25 yards in length per piece.

The particular weave of Alpacamos is not described in any modern book of reference dealing with textiles. Names of fabrics vary, come into fashion, and lie out. Few connected with modern textile industries could describe, say, fabrics such as "Durant," "Tammy," or "Everlasting Webster," yet not so very long ago there were fabrics currently sold under these names.

Dyed Balzarines.—The cotton variety of this somewhat ancient fabric was an all-cotton light weight open fabric resembling gauze, approximating 31 inches in width and 30 yards in length per piece, piece-dyed or solid colours after leaving the loom. See Balzarines.

Dyed Cambrics. Red Cambric is essentially a plain woven linen fabric of light weight and soft finish, but the kind of Cambric most often met with is a cotton fabric of similar weave. Dyed Cotton Cambrics are piece-dyed after leaving the loom and, like White Cambrics, are generally finished with a smooth glazed surface. The differentiation between Cotton Cambrics and Muslins is somewhat difficult, as the term Cambric is often applied to what are in reality Muslins.

Dyed Corduroys (Cotton).—The term is used to describe a pile weave ribbed cotton fabric which has been coloured in the piece with a view to enhance its value and appearance.

Dyed Cotton Lastings.—This fabric is a plain all-cotton twill or kindred weave material firmly woven from hard-twisted yarns and piece-dyed after weaving. Lastings enter largely into the manufacture of uppers for boots and shoes.

Dyed Cotton Spanish Stripes. A plain woven all-cotton fabric woven with a plain weave, having both surfaces raised, giving the fabric the general appearance of Flannelette; being a dyed fabric, it is piece-dyed after leaving the loom. As a distinctive feature, Spanish Stripes have a list or edge of different colour to the main body of the fabric. The warp threads are finer and harder twisted than the filling threads, which are soft and full to facilitate the raising during the process of finishing. In width this fabric may vary between 28 and 64 inches, and in length it

averages 25 yards. A similar fabric woven from dyed yarns would be a coloured woven fabric and would not belong to the dyed cotton variety.

Dyed Crimp Cloth. An all-cotton fabric having the distinctive "cockled" striped effect of Crimp Cloth. This cockled effect is produced by greater tension in some of the warp threads than in others. Dyed Crimp Cloth is produced after leaving the loom and is distinguishable from coloured woven Crimp Cloth, which is woven from coloured yarns. This material seldom exceeds 3 inches in width, the length per piece varies.

Dyed Drills. A heavy twill-weave, all-cotton fabric, the weave of which is described under "Drills," which has been dyed in the piece, i. e., impregnated with a uniform color over its whole surface.

Dyed Figured Cottons. Under this heading may be grouped all such fabrics which are one piece of all cotton, (b) are figured by having any design, large or small, woven or embossed, on their surface, (c) are dyed in any colour, and (d) are not otherwise enumerated. The fabrics coming under this heading include both fabrics which have not been subjected to any special process of finishing and those which have been so treated, irrespective of the style of finish. The ribs or reps of such fabrics, which are known as "Reps" or "Kibs," do not in themselves constitute figures. Printing produces a style of ornamentation which does not rightly belong to this class of goods in which it must only be the result of weaving or embossing.

Dyed Figured Cotton Italians.--This name is used to designate an all-cotton fabric having the characteristic even, close, smooth surface of the plain Italian Cloth, but which, in addition, has had its surface ornamented with any figures, floral or geometrical effects, etc., this figuring having been produced either by means of extra threads, or by combining the warp and weft threads, or by having the pattern or outline of the design impressed, stamped, or embossed in the fabric, which, as it is a "dyed" fabric, has been coloured after leaving the loom.

Dyed Figured Cotton Lastings. This fabric is essentially an all-cotton twill or kindred weave and is firmly woven from hard-twisted yarn, which has been figured or ornamented in the weaving by the introduction of a small floral or geometrical design. The fabric, being a "dyed fabric," is produced. Like Plain Lastings, this material enters largely into the manufacture of uppers for boots and shoes.

Dyed Figured Cotton Reps.—This name is used to designate an all-cotton material which is primarily a Rep fabric. It combines the prominent reps or ribs running transversely across the face of the cloth, which is the distinctive feature of a Plain Rep fabric, with certain small figures, floral or geometrical effects, etc., which are introduced for the purpose of ornamentation. This figuring may be produced either by means of extra threads on the surface of the cloth, by the mode of interlacing the warp and the weft threads on the surface of the cloth, or by having the pattern or outline of the design impressed or stamped in the fabric, which, as it is a dyed fabric, has been coloured after leaving the loom. This kind of material averages 32 inches in width and 32 yards in length per piece.

Dyed Figured Ribs.— This name is used to designate a fabric which is primarily a rib material having the characteristic rep or rib running from selvage to selvage, or, in some cases, lengthways of the fabric, but which, in addition, has had its surface ornamented with any figures, floral or geometrical designs. This ornamentation constitutes the figuring and is produced either by means of extra threads or by having the pattern or outline of the design impressed, stamped, or embossed in the fabric, which, as it is a dyed fabric, has been coloured after leaving the loom. A Dyed Figured Cotton Rib would be an all-cotton material with an average width of 32 inches and averaging 32 yards to the piece.

Dyed Fustians.—Fustians embrace two classes of finished goods, some of which are characterised in finishes by a nap raised on the fabric, such as Moleskins, Beaverteens, etc. The other class comprises cut pile fabrics, variously known in the trade by distinctive names, such as Velveteen and Corduroy. Fustians are essentially all-cotton fabrics. Dyed Fustians are piece-dyed fabrics and not woven from coloured yarns.

Dyed Imitation Turkey Reds.—The fabric of which this class of goods is an imitation is generally a twill-faced all-cotton cloth piece-dyed with a cochineal dye, which is fast to light and washing. The Dyed Imitation Turkey Red is similar in construction of fabric, but depends for its colouring upon a chemical or synthetic dye which, while it resembles cochineal, has not the same qualities of fastness.

Dyed Imitation Turkey Reds are piece-dyed fabrics averaging in width 32 inches and in length 25 yards per piece. Fabrics coming under this heading are invariably plain, i.e., unornamented either through weave combination, printing, or embossing. e.

Dyed in the Piece or Piece-dyed.—These terms virtually explain themselves. When a fabric is impregnated with a uniform colour over its whole surface it is said to be dyed in the piece or piece-dyed.

* Piece-dyeing is open to produce cloud spots, stains, etc., which would not appear if the yarn had been dyed previously to being woven, for in that case even if the yarn had in parts got stained it would not show as a clearly defined stain in the fabric once woven. Piece-dyed fabrics may sometimes be distinguished from yarn-dyed fabrics by unravelling threads of each kind. In the case of yarn-dyed fabrics, the dyestuff has penetrated through the yarn, while in the case of piece-dyed fabrics the dye-stuff has not the same chance of penetrating yarn as completely. The term "dyed in the grey" (*see under* Union Cloth) has a similar meaning to "dyed in the piece" or "piece-dyed."

Dyed Lawns are plain-woven light-weight cotton fabrics of soft finish which have been piece-dyed, *i.e.*, impregnated with a uniform colour over their whole surface after leaving the loom. They vary in weight from $1\frac{1}{2}$ to $2\frac{1}{2}$ ounces per square yard and in width from 27 to 46 inches. They answer to descriptions of White Lawns (which *see*), and differ from them only in regard to the fact that they are piece-dyed.

* **Dyed Lenos.**—This fabric or class of fabric is an all-cotton material woven with a gauze and Leno weave and subsequently piece-dyed. The description of Leno fabrics given in a United States Government publication reads: "A term frequently used where various weaves or combination of weaves also have warp threads crossing over one or more warp threads instead of lying parallel to one another throughout the fabric. The warp threads which thus appear in a zig-zag way either on the surface or closely interwoven in the fabric, are, in addition to interlacing with the filling threads, also crossing their neighbouring warp threads that continue in a parallel line with the selvages."

Leno fabrics generally show stripe effects, the exception to this being the All-over Leno, which resembles in weave the ordinary Cellular Cloth.

Dyed Leno Brocade.—This term is used to designate a fabric woven in the Leno style, that is to say, in a combination of "gauze weaving" and any other style of weave, and the term Brocade shows that it is a figured fabric having a figure chiefly constructed by weft threads floating on the surface of the material. As in this class of fabric the threads are not dyed prior to weaving, the term "dyed" shows that the material has been dyed after it has left the loom. *See also* Lenos.

Dyed Muslins.—Dyed Muslin is an all-cotton fabric of light weight, plain woven, which has been piece-dyed, *i.e.*, impregnated with a uniform colour over its whole surface. There is a difficulty in describing Muslins, for the term Muslin, according to one Government publication, is “a generic term for thin plain-woven cotton cloth. The name, however, is frequently used in conjunction with such names as dotted, fancy, figured, spot, check, Swiss, etc., which in each case would denote some combination weave, or as containing stripes or checks, but the fabric still preserving a light weight.” From this, however, it seems clear that a Muslin is a plain non-figured fabric of light weight.

Dyed Plain Cottons.—Under this heading may be grouped all such fabrics which (a) are made of all cotton, (b) have a surface which has not been ornamented by the introduction of any small figures, floral or geometrical designs, whether produced by means of extra threads or by the mode of interlacing the warp and weft threads on the surface of the cloth or by having the pattern or outline of the design impressed or stamped in the fabric, (c) are dyed in any colour, and (d) are not otherwise enumerated. The fabrics coming under this heading include both fabrics which have not been subjected to any special process of finishing and those which have been so treated, irrespective of the style of finish.

Dyed Plain Cotton Italians.—The fabric answering to this description is primarily an all-cotton Italian Cloth whose surface does not show any ornamentation produced either by weaving, printing, embossing, or any other process. The fact that the fabric has been specially finished, to improve its appearance, by being mercerised, schreinered, gassed, silk or electric finished, does not alter its nature of a “plain” cloth. The fabric, being a “dyed” fabric, is one which has been coloured after leaving the loom. As Italian Cloths are generally woven from a black warp and grey weft and, after weaving, dyed in the piece, they are really “cross-dyed.”

Dyed Real Turkey Reds.—Turkey Reds are a class of staples whose salient distinctive feature is the fact that the dye used in their manufacture is cochineal dye. Real Turkey Reds are absolutely fast dyed, the colour will not run when washed, and it will not appreciably fade when exposed to the action of the sun.

Turkey Reds are piece-dyed, that is to say, the cotton fabric is woven, generally a twill-faced cloth, and the piece is dyed. It is not woven of yarn previously dyed. There does exist a yarn dyed with turkey red; this, however, is principally used for

weaving in to the ends of pieces of White Shirting or Sheeting certain distinguishing red weft threads, markings that are placed there by the manufacturer of the grey goods (1) to facilitate recognition of his goods when they come back from the bleacher, (2) to denominate quality of goods by acting as a distinctive mark, (3) to prevent the piece being cut at either end and the part cut off stolen whilst at the bleachers. This yarn is also used for markings which are to withstand washing without running. The cost of dyeing the grey or white fabric into a Turkey Red is often greater than the original value of the fabric.

Dyed Reps are fabrics which have as a predominant feature a rep or rib running transversely across the face of the cloth from selvedge to selvedge and which have been piece-dyed after leaving the loom. Even without the term "dyed" being used the term Rep by itself would generally be used to designate a dyed plain cotton fabric of the Rep variety. For particulars of weave, *see under Rep*.

Dyed Ribs.—Fabrics which are either warp or weft ribbed, i.e., having ribs running either from selvedge to selvedge as in warp ribs, or lengthways of the material as in weft ribs, and which have been piece-dyed after leaving the loom. For particulars of distinctive weave, *see under Warp Ribs and Weft Ribs*.

Dyed Sheetings.—It would appear that when a true Cotton Sheeting fabric has been dyed it is no longer known as a "Sheeting," and this is supported by the remark under the heading Sheetings which appears in a United States Government publication to the effect that "should a Sheeting be dyed or printed, it is never sold as Sheeting, but under some other name." A Dyed Sheeting would, of course, be a stout all cotton fabric answering to the description of a Bolton Sheeting, woven from coarse yarns, as a four-shaft two and two twill, and measuring in width up to 120 inches; but the fabric most likely to be described as a Dyed Sheeting is the narrower variety, which is most often plain woven, measuring 36 inches by 40 to 80 yards, and slightly heavier than Shirtings of the same measurements which, subsequent to weaving, has been piece-dyed.

Dyed Shirtings.—The term in its narrower sense is used to designate what is virtually an all-cotton cloth, woven with a plain weave and having the warp and weft approximately equal in number of threads and counts, which has been colored by being piece-dyed after weaving. The actual fabric, apart from the dyeing, is that of a Grey Shirting or Grey Sheeting, which are more fully described under their respective headings.

Dyed T-Cloths.—Piece-dyed all-cotton plain-woven fabric, woven from low-quality yarns, generally put up in 24-yard lengths.

Dyed Velvet Cords (Cotton).—This fabric differs from Dyed Velveteen Cords only as regards the length of the pile, which is longer or deeper in Dyed Velvet Cords than in Dyed Velveteen Cords. The difference between this fabric and Corduroys is that Corduroys have perfect half-round regular pile ribs, separated by a dividing line between each stripe or pile rib, showing both warp and filling threads, whilst Velvet Cords have no such dividing line.

Dyed Velveteen Cords (Cotton).—Like the plain Velveteen, this fabric is essentially an all-cotton pile fabric in which the distinguishing effect is formed by the points of the fibres in the filling yarns, termed the pile, being presented to the vision, and not the sides of the yarns as in the majority of cases. The cords are produced by a process of cutting away the pile so as to form raised cord-like corrugations running lengthways of the piece. Being a dyed fabric, it is coloured uniformly all over the piece in some solid colour. It differs from Dyed Velvet Cords only as regards the length of pile, which in the Velveteen variety is shorter. The difference between this class of material and a Corduroy is that Corduroy has a dividing line between each stripe or cord of pile, showing both warp and filling threads, whilst Velveteen Cords have no such dividing line.

Embossed Velvet (Cotton).—The term Cotton Velvet is generally recognised in the manufacturing and distributing trade to be a misnomer, and the material or fabric which would appear to come under this classification is in reality an Embossed Velveteen, which see.

Embossed Velveteen (Cotton).—This term is used to designate an all-cotton pile-weave fabric generally woven as a weft-pile weave, the pile surface, consisting of threads or fibres in the filling yarn which forms the pile, standing up at right angles to the back of the fabric. The distinctive feature of this class of fabric is the embossed design or pattern, which is essentially an incanted ornamentation produced by pressure and heat. The embossing machine for giving an indented ornamentation to Velvet or Velveteen and other fabrics has engraved copper rollers, which are heated by enclosed red-hot irons or series of gas jets when operating on dampened goods. The engraved rollers have designs in intaglio, which confer a cameo ornamentation upon the fabric being embossed.

Embroideries.—When applied to woven fabrics this name is used to designate a fine plain-woven cloth made from fine yarns and used for embroidery purposes. Generally a linen fabric.

End.—When the word “end” is used in connexion with weaving it signifies the warp threads, while each filling or weft thread is called a “pick.” When used to designate a class of twill-weaving such as “a five-end twill,” it refers to the total number of warp and weft threads in the twill pattern; thus, “a five-end twill” designates the interlacing of four warp and one weft. Under “Twill Weave” will be found the generally recognised ways of arranging the order of interweaving.

English Foot.—A stocking having two seams in the foot, one on each side of the sole.

Eolienne.—A sheer silk and wool material. Also in silk and cotton.

Eponge.—A French term for Sponge Cloth.

Equestrienne Tights.—Tight-fitting knitted drawers for women's use, made of ribbed cloth, either with or without feet.

Étamine.—French name for Bolting or Sifting Cloth, generally made of silk yarn and used for the purpose of sifting flour. The term is used in America to designate mesh or net weaves.

Étamine, though often made of silk, is found also in wool, cotton, linen, etc. Plain weave and open-work structure are its salient features. It is equally used for sifting powdered solids and filtering liquids.

Extract is a comprehensive term used to indicate a special class of fibres which have been obtained by “pulling” or beating to pieces material which may have been milled or unmilled, but which was partly composed of cotton, this cotton being got rid of or destroyed by the treatment which is known as carbonising.

Extracted.—Goods in which the pattern has been printed, first applying the design with a material which, after dyeing, permits the colour, as it affects the design, to be washed out or “extracted.”

Façoné.—Having a figure or design raised on the surface.

Paille.—A soft flat-ribbed silk.

Fancies.—Fancy is a term used to designate those fabrics which are not woven in the same way year after year, but which show variations in weave, colour, or both colour and weave. The principal Fancies of the dress goods variety are Brocades, Cuspettes, Mellores, Hopsacking, Stripes, Checks, Plaids, Mélanges, and Mixtures.

Fents.—When a full-sized piece of cloth is found to be imperfectly woven in parts or damaged through stains, etc., and unsaleable as a whole piece, it is cut up into short lengths; these short lengths are called “fents.” The name also is applied to short lengths cut from piece ends and is equivalent to the term “remnant.” The value of fents is much less per yard than for similar cloth in the full piece.

Figured.—When used with reference to textiles the term “figured” means that for the purpose of ornamentation certain extra threads—known as figuring threads—have been introduced on the surface of a plain ground structure or on other ground structural weaves, and afterwards allowed to lie loosely or “float” underneath the ground cloth structure. When the extra threads introduced run lengthways in the piece the figured fabric produced is known as an “extra warp” figured cloth. When, similarly, the figured effect is obtained by the introduction of extra threads running across the face of the material, the figured fabric produced is known as an “extra weft” figured cloth. The most elaborate effects, however, are produced by means of the extra warp effects. A cloth may be figured without the addition of any extra warp or weft thread but by combination of weave.

Figured Muslin.—When an ordinary plain-weave fabric of the Muslin variety has been ornamented by means of combination of weave or an extra thread, whilst still retaining the characteristic light weight, etc., of the true Muslin fabric, it is known as a Figured Muslin. Unless specially designated, a Figured Muslin would be an all-cotton fabric.

Figure Weaving.—When complicated and elaborate designs are required the cloth must be woven with the aid of a Jacquard, which is an apparatus for automatically selecting warp threads and manipulating them to facilitate the passage of the filling. This style of weave produces figured effects on the face of the fabric and is generally used to produce patterns of great width. Such figured and elaborate designs are classed under the name of Jacquards.

Filled Cotton Cloth.—This form of cloth has the interstices between the threads filled with glue, china clay, white lead, chalk, plaster of paris, glauber salts, glucose, or other filling substances.

• **Filling.**—This term is given to the process of adding weight to a fabric by subjecting it to an operation, whereby it will have been made to absorb certain chemicals or substances. The principal filling agents are zinc chloride, magnesium sulphate, magnesium chloride, glue, gelatine, dextrine, starch, and water glass (alkali-silicate). The term "filling" is also used to designate the material used in weighting the fabric and has the same value as "loading" or "weighting."

When the word "filling" is used in connexion with weaving it always signifies the weft threads, each of which is also called a "pick."

Flannel (Woollen).—The true Woollen Flannel should be an all-wool fabric, into the making of which no fibres other than wool enter. Woven with either a plain or twill weave, Flannel is a soft-finished material, which, in the better grades, should be of a non-shrinking character. When a very small percentage of cotton is found in so-called all-wool Flannel, it is sometimes due to cotton having remained in the machines used for the carding of the wool prior to making it into yarn. In some countries as much as 1 per cent. of cotton is allowed in an all-wool Flannel. When a higher percentage is found the fabric is no longer considered an all-wool Flannel. When cotton is made to form part of Flannel it is scribbled or carded with the wool to increase the strength of the thread and improve its spinning properties. Such yarns are known as Carded Unions and when woven will produce a Woollen Flannel, which is distinct from an all-wool Flannel. Inasmuch as the term "woollen" is commonly used in opposition to "all-wool," and that it is recognised in England that waxes, shoddy, and blends of material other than wool are referred to as "woollen," the term Woollen Flannel is applicable to a fabric that is not an all-wool material.

Flannelette.—Like Cotton Flannel, this fabric is woven from soft mule-spun yarn, which is more suitable for a raised material than a ring-spun yarn. Flannelette may be either plain or twill woven and may be either piece-dyed or woven with coloured warp and weft yarns to form either stripes or checks.

Flannelette is a cloth produced to imitate Flannel and has, owing to its raised surface, a "woolly" feel. By being subjected to a special treatment, Flannelette can be rendered "fireproof"; if untreated, it is a highly inflammable material. The better qualities of Flannelette are distinguished from the lower grades

by the former being more closely woven in the warp, and the raised nap is shorter in the better grades. Flannelettes are sometimes printed, in which case they would be more correctly described as "Printed Flannelettes," the ordinary Flannelette of commerce not being as a rule "printed." Whereas in certain countries it is not legal to sell as "pure wool Flannel" a material containing cotton, there is nothing to prevent a manufacturer from selling as Flannelette a material in whose composition a certain amount of wool may enter. Unlike Cotton Flannel, which from its very name shows that the material is of cotton, and by inference cotton only, the term Flannelette may not always designate an all-cotton material, although by general acceptance in the trade Flannelette should be an all-cotton fabric.

Flat Underwear.—Goods knitted in plain stitch.

Fleece-lined.—Applied to a variety of heavy-weight undergarments knitted with three threads—namely, face yarn, backing yarn, and a third thread of yarn tying the face and back together. The heavy nap or fleece is produced by refining the cloth through wire rolls, called brushers. The term "fleece-lined" is often misapplied to ordinary single-thread underwear which has been run through the brushing machine for the purpose of raising a light nap on the inner surface.

Floconné.—Having small flakes, in white or colour.

Florentine Drills.—When a Drill is woven with a twill weave it is known as a Florentine Drill, to distinguish it from Satin Drill, which is woven with a warp-faced sateen weave.

Folded Yarn.—Folded Yarn is produced by twisting together two or more single yarns. When two single threads are twisted together the Folded Yarn produced would be called a "two-fold." If the single yarn used in producing the "two-fold" yarn was of 40's count (that is to say, of yarn of which it took 40 hanks of 840 yards to weigh 1 pound), the "two-fold" yarn produced would really become equivalent to 20's count (that is to say, it would take 20 hanks to weigh 1 pound); however, it would not be referred to as being a 20's count, but as a two-fold forties and designated 2/40's. All Folded Yarns are designated by two sets of figures separated by a line, which shows on one side the number of threads folded together and on the other the "count" of the single threads thus folded together. By dividing the number of the single threads into the

counts the actual number of hanks of the Folded Yarn per pound is ascertained thus:—

Two-fold 4c's, written $2/40 =$	20	folded hanks per pound.
Three-fold 30's, .. $3/30 =$	10
Three-fold 60's, .. $3/60 =$	20
Four-fold 60's, .. $4/60 =$	15
Four-fold 120's, .. $4/120 =$	30

All Folded Yarn is not composed of single threads of the same count. Where such Folded Yarns are met with, and when it is desired to ascertain the number of hanks of such Folded Yarn per pound, the simplest way to proceed is to take the highest count and divide it first by itself and the other counts in succession, then divide the sum of the various quotients into the highest count, and the answer will be hanks per pound:—

$$\begin{array}{r}
 30 - 30 = 1 \\
 30 - 20 = 1\frac{1}{2} \\
 \hline
 2\frac{1}{2} \overline{) 30} \\
 \hline
 12 \text{ Answer}
 \end{array}$$

If folding yarn part of the length of the original threads folded is taken up in the twist; hence, when folded, they will no longer measure the regulation 840 yards per hank, but slightly under.

Foulard.—A soft twilled silk, usually printed.

French Foot.—A hosiery term meaning having only one seam, and that in the centre of the sole.

Full Regular (sometimes called Looped).—A term applied to hosiery or underwear in which the seams have been connected by hand knitting.

Full-fashioned.—A term used to designate hosiery knitted in a flat web, which is shaped by the machine so as to fit the foot, leg, or body. The webs, or sections, are sewn together to form hosiery, underwear, etc.

Fustian.—This name is given to designate low grades of cotton fabrics woven with a pile weave, such as Cotton Velvets, Velveteens, Corduroys, Moléskins, Cordings, etc. Fustian is also applied to such fabrics when they are made in a combination of cotton and flax or other vegetable fibre. It is more used as a

generic term designating a class of fabrics than to designate one particular kind of fabric. One class of Fustians has a raised "nap" on one or both sides, and includes Cantoons or Diagonals, which have a pronounced weft twill on the face side and are used for riding breeches.

Galatea.—A cotton fabric having coloured stripes; the weave is usually a three-shaft, but sometimes a four-shaft, warp twill weave. The stripes may be either simply coloured, whilst retaining the twill weave, or they may be plain woven as well as coloured. This material is often used for washing uniforms for nurses and hospital attendants. The weave of Galatea is similar to that of Jean, Nankeen, or Regatta Twill.

Gauge.—Applied to the number of meshes or wales to the inch in underwear or hosiery. For example, a 16-gauge fabric will have 16 wales or ribs to the inch.

Gauze Weave.—In gauze weaving all the warp threads are not parallel to each other, but are made to intertwist more or less amongst themselves. This style of weaving produces light, open fabrics allowing the introduction of many lace-like combinations. The warp is double, one set being the usual or ground warp and the other the "douping," or warp that intertwines itself on the ground warp. Gauze weaving produces fabrics which are peculiar for their openness, lightness, and strength. When gauze is combined with plain weaving it is styled "Leno."

Gingham.—Gingham is an all-cotton fabric, always woven with a plain weave—a yarn-dyed cotton cloth in stripes or checks. It is woven in various grades, having from 50 to 76 ends per inch in the reed and of 1/26's to 1/40's cotton yarn in both warp and weft. It is a washing fabric made in both checks and plaid patterns, into which a great variety of colour combinations are introduced. Ginghams are made with from two colour warp and filling to eight colour in warp and six in filling. During the finishing process the loom-state fabric is sewed end on piece to piece until a continuous length of cloth of several hundred yards is obtained (this is done to facilitate handling). It is damped by a sprinkler to make it more readily take up the starch size with which it is liberally treated. One variety of Gingham known as Madras Gingham is distinctly a Shirting fabric. Ginghams, when having a highly variegated colouring, are described as Checks.

Clacé.—Originally applied to a fabric having a glossy, lustrous surface. Now often applied to "shot" silks, that is, plain weaves wherein the warp and filling are of different colours.

Granité.—A weave in which the yarns are so twisted as to create a pebbled surface.

Grenadine.—A somewhat elastic term used to describe an openwork, diaphanous material of silk, wool, or cotton.

Grey, in the Grey, or Grey Cloth.—These terms are used to designate fabrics that are in the loom state and that have been woven from yarn that was neither bleached nor dyed. A Grey Shirting would no longer be called a Grey Shirting after it had been bleached. In the woollen industry the term "grey" is applied to the web in its loom state previous to its being put through the various necessary processes to make it into a finished cloth.

Grey Drills.—Grey Cotton Drills are all-cotton medium and heavy weight single cloths woven from unbleached yarns as a three-shaft twill (two warp and one weft) which have not been bleached, dyed, or printed from the time they left the loom. Varying in weight according to quality, they are, however, generally put up in pieces measuring 31 inches in width by 40 yards in length. They are more fully described under Drills.

The Pepperell Drill is a Grey Drill of superior quality made from high-class yarns and exceedingly well woven.

Grey Jeans.—This name is given to an all-cotton fabric woven as a three-shaft twill having either (a) each weft thread passing over one and under two warp threads, or (b) each weft thread passing over two and under one warp thread, the warp and weft intersections traversing one thread and one pick further from their respective positions each time a pick of weft is inserted.

When woven as a warp faced twill fabric from strong yarns, the cloth is often called a Drill, and is used for suitings, boot linings, corseting, etc; when woven from lighter yarns as a medium-weight weft-faced twill fabric, the cloth is largely used for linings. In width it varies from 28 and under to 31 or more inches and in length from 30 to 40 yards per piece. A "Grey" Jean is a Jean in the loom state, i.e., which has not been bleached by being treated with bleaching powders, etc.

Grey Sheeting.—There are two distinct varieties of Grey Sheeting. The first kind is used for bed sheeting and is a stout cotton cloth woven from coarse yarns, usually in a four-shaft two-and-two twill weave, and having a width of as much as 120 inches. The weave of this material being a twill weave having an equal number of warp and weft threads to the inch, the twill lines or diagonal produced will be at an angle of 45 degrees to a line drawn across the width of the material. This diagonal effect is produced

by the warp and weft intersections traversing one thread and one pick further from their respective positions each time a pick or weft is inserted. This kind of Sheeting is known as Bolton Sheeting, which is a grey material, *i.e.*, unbleached. In length the piece may measure up to 80 yards. The second kind of Sheeting is Waste Sheeting, made from waste and condenser welfs, *i.e.*, welfs made from certain waste cotton which accumulates during the process of spinning yarn. This waste is treated by special machinery, which prepares it and spins it into a full, level, and soft yarn, which is used for weft in the weaving of Sheatings. Waste Sheatings are woven like Bolton Sheeting, with the exception of the lower qualities, which are often plain or calico woven. The lower grades of Grey Sheeting are often simply grey Calico cloths of about 36 inches in width and resembling very closely Grey Shirtings, the only difference being that they are slightly heavier in the yarn than the ordinary Grey Shirting. Grey Sheeting is generally made up into pieces of from 40 to 80 yards in length and varying in weight according to count of yarn used.

Grey Shirting.—A Grey Shirting is an unbleached cotton cloth woven with a plain weave and having the warp and weft approximately equal in number of threads and counts; the fabric has a plain, even surface, which, when the threads are evenly spaced, is said to be well "covered." Grey Shirting, a staple import into the Eastern markets, is made up in pieces measuring from 36 to 40 yards in length, a width of from 36 to 45 inches, and weighing from 7 to 11 pounds and over per piece, according to the count of the yarn and the amount of size used. This class of fabric has the warp threads heavily sized. The exact difference between Grey Shirtings and certain grades of Grey Sheatings is at times non-apparent. Again, a Grey Shirting may be termed a Calico, which in the trade has become a general term used to designate practically any cotton cloth coarser than Muslin.

Grey T-Cloths.—All-cotton plain-woven unbleached fabric of low quality and heavily sized yarns nearly always put up in 24-yard lengths. The name is said to be derived from the mark **T** of the original exporters.

Grosgrain.—A silk fabric having a small ribbed effect from selvedge to selvedge. When the rib runs lengthways the fabric is known as a Millerayes.

Habit Cloth (Woollen).—An all-wool cloth similar to Medium, Broad, and Russian Cloth. Average width, 54 to 74 inches. In the better grades it is a high-priced fabric generally used for riding habits. Met with in dark shades of green or else in black.

Habutai.—A plain-weave silk, of smooth and even texture, originally made in Japan on hand looms.

Hair-cord Muslin. A plain weave fabric having stripes or checks formed by coarse threads, which stand out in a clearly defined manner.

Hand Looms and Power Looms. The difference between these two kinds of looms lies in the fact that in the former (hand loom) the weaving is the result of the loom being worked and controlled by hand and foot, whereas in the power loom, whether belt driven or driven by electric motor, the power transmitted to the loom works all the essential parts, which are:—

- | | |
|---------------|----------------------|
| 1. Warp beam. | 4. Reed or beater in |
| 2. Heddles. | 5. Cloth roll. |
| 3. Shuttle. | |

When a power loom has been suitably timed up, *i.e.*, timed so that the various movements necessary for the forming of the “shed” and the passing of the shuttle and the beating-in occur in the right sequence and at a correct interval of time, the weaver (who, in the case of power looms, is often called the overlooker) only has to attend to the broken warp threads or replenishing of the weft shuttle. With a hand loom the weaver controls the heddles which form the shed, throws the shuttle carrying the weft thread through the shed, and as fast as each filling thread is interlaced with the warp beats it in close to the previous one by means of a reed which is pulled by hand towards, and recedes from, the cloth after each passage of the shuttle. This is done to make the cloth firm. The movement of the reed in the hand power loom (or, more correctly, in the hand and foot power loom) being controlled by the weaver and not mechanically, accounts for irregularity in firmness of weave not found in fabrics woven on a power loom.

Handle.—This term is used either as a “wool term” in connexion with wool or as a general textile term in connexion with fabrics. As a wool term it refers or designates all the attributes which determine quality, *i.e.*, softness, fineness, length, and elasticity—noticeable when wool is judged by the feel. Easier to define than to acquire, “handle” also enters into the judging of woven fabrics. It is then used to denote the hardness, harshness, softness, smoothness, etc., which similarly are factors of quality and which are often best appreciated by the sense of touch.

Harvard Shirting.—This style of Shirting is generally recognised by its broken twill effect, which may be combined with

plain stripes, small diamond patterns, etc., woven from dyed yarns. The salient feature of Harvard Shirtings is the above effect in different colours. The ground weave is generally a two-and-two twill.

Henrietta.—A soft, lustrous, twilled fabric of wool; similar to a Cashmere, but finer and lighter.

Herring-bone.—A binding often used in facing the neck and front opening of undershirts. Also applied to the stitching which is made to cover the edge of the split sole in hosiery. Used in connexion with textiles, it is applied to striped effects produced by alternating a left-hand and a right-hand twill-weave stripe.

Hessian.—A strong, coarse, plain-woven packing or wrapping cloth made from jute or hemp yarns. A standard make of this material weighs $10\frac{1}{2}$ ounces to the yard, is 40 inches wide, and averages 13 shots per inch.

Hog, or Hoggett Wool, is another name for lambs' wool; it is the product of the first clipping of the young sheep and can be distinguished by the fact that its ends are pointed, whereas subsequent clippings yield wether wool with blunt and thickened ends.

Honeycomb.—This designates a style of weave and not an actual fabric. Marked ridges and hollows, which cause the surface of the fabric to resemble that of a honeycomb, are the salient characteristics of this style of weave. The term is also applied to leno weaves when consecutive crossing ends cross in opposite directions.

Huckaback.—This name designates a class of weave mainly used in the weaving of towels or Towelling, which combines a small design with a plain ground. The short floats of warp and weft and the plain ground of these weaves give a rough surface combined with a firm structure. The small design entering into this class of weave varies, but is always a geometrical design and not floral.

Imitation Rabbit Skin.—Generally an all-cotton pile-weave fabric having a long pile, which has not the same amount of lustre as either a silk or mohair pile, being duller in appearance. This kind of fabric may be distinguished from a silk or mohair pile material by the fact that its pile will crush more readily than either. Its pile will not spring back

into place readily, more especially when the pile is long. Generally 48 to 50 inches wide and 60 yards long, it is shipped on frames, on which it is fastened by a series of hooks. These hooks hold the material by the selvages, which are made specially strong. Two 60-yard frames are generally packed in one box or case.

Ingrain.—A term for knitted goods applied to raw material or yarn dyed before knitting.

Irishes.—This generic name is applied to linen fabrics, which are a speciality of Ireland. Irishes have been imitated in cotton, and when such a fabric is met with it should be designated as a Cotton Irish. The term Irishes would cover such fabrics as Irish Cambric, Irish Duck, and Irish Linen.

Irish Cambric.—This fabric, like all true Cambrics, is an all-linen fabric, plain woven, without a selvage. It has been imitated in cotton, and the name is now currently used to designate an all-cotton plain-woven fabric finer than lawn, in which the warp yarn is often of a different thickness from that used for the filling and is finished with a smooth glazed surface.

Italian Cloth.—A plain cloth generally made of standard materials, *i.e.*, fine Botany weft and a cotton warp. Italian cloth is usually a weft-faced fabric. Like all fabrics woven with a weft-faced satin weave, the weft or filling threads are practically all on the surface of the cloth, producing an even, close, smooth surface capable of reflecting light to the best advantage. Italian cloth is generally cross-dyed, that is to say, woven from a black warp and grey weft, afterwards dyed in the piece. It may be woven either as an all-cotton, a cotton and worsted, a cotton and wool, or a cotton and mohair fabric. Its chief characteristic is its smooth, glossy, silky appearance obtained by various processes of finishing given to the cloth after it is woven. All finishes have the same tendency and purpose, which is to improve the appearance and enhance the value of the cloth. Whilst Italian Cloth may be either plain, figured, embossed, printed, etc., or a combination of these varieties, the name is applied to a "plain dyed cotton fabric."

Italian Cloth, Figured, Cotton Warp and Wool Weft.—This fabric, in addition to the characteristics of the plain Italian Cloth woven from cotton warp and wool weft, has had its surface ornamented by the introduction of figures or floral or geometrical designs produced either by combination

of weave or by means of certain extra threads known as "figuring threads." These figures may be produced by means of either extra warp or extra weft threads. In this class of material, where the weft is wool, the extra figuring thread is generally a weft thread. The figuring thread, after having served the purpose of ornamenting the face of the cloth, is allowed to lie loosely or "float" underneath the ground cloth structure. Where the figuring is produced by combination of weave no such floating threads appear.

Italian Cloth, Plain, Cotton Warp and Wool Weft.—

Under the heading "Italian Cloth" it will be seen that such a fabric is essentially a weft-faced satin-weave material having practically the whole of the weft or filling threads on the surface. When it is woven from a wool weft and a cotton warp the material shows the face of the cloth as a wool face, the main bulk of the cotton warp showing on the back of the fabric. When woven with cotton warp and wool weft, Italian Cloth still retains the characteristic smooth surface of all weft-faced satin-weave fabrics. Very simple tests by burning will show the nature of both warp and weft, and this class of fabric illustrates clearly, by contrast between the two sets of threads, the nature of weft-faced satin or kindred weave fabrics. Such Italians are generally cross-dyed, *i.e.*, woven with dyed warp and grey weft, and then piece-dyed.

Jaconet.—There are two varieties of Jaconets, both of which, however, are all-cotton fabrics. One is a hard-finished fabric similar in weight to Victoria Lawn, having a smooth, lustrous, Cambric finish. The other is a soft-finished material which can hardly be distinguished from a heavy soft-finished Nainsook. Jaconet is a plain-woven fabric which has been variously described as a "thin, soft Muslin," or as a "plain-woven cotton fabric lightly constructed, composed of light yarns." Bleached, dyed, or printed in the grey piece length, similar to Mulls, Nainsooks, Cambrics, etc. It is also spelt Jaconettes.

Jacquards is a loose term applied to elaborate designed fabrics produced by means of a machine called a Jacquard, the distinctive feature of which is an apparatus for automatically selecting warp threads and moving them independently of each other. Jacquards are the produce of what is termed figure weaving, in which complicated figures are woven into the fabric.

Jagger.—This name is used to designate the products of a certain manufacturer whose material is described as being an "all-wool" material. Generally applied to underwear and fabrics into whose composition camel wool is said to enter largely.

Jean.—A Jean is an all-cotton fabric woven as a three-shaft twill similar to a Dungaree. Good-quality Jeans, woven from coloured warp, are often used as sailors' collars and for children's clothing. Woven in the grey as a weft-faced twill and subsequently dyed, they are used for lining cloths. The weave of a Jean fabric, which is its salient characteristic, is described under "Grey Jeans," which is the kind of Jean most often met with.

Jeanette.—A three shaft weft twill fabric having warp and weft threads about equally proportioned in number and thickness.

The name "Jeanette backed" is applied to certain pile fabrics that have a three-end twill back.

Applied to a cotton material, it would correspond to a Jean type fabric not as stoutly woven as a Jean. One authority, however, claims that it is "a similar fabric to the Jean in which the warp predominates."

Jouy.—Printings in small floral effects on silk or cotton, similar to Pompadour designs. Named after a Frenchman who established a plant for such work during the reign of Louis XV.

Kerseymere.—Seldom met with under this name. Kerseymere is a fine woollen cloth of a serge-like character, woven with a three-shaft weft-faced twill weave.

Khaiki.—A Japanese silk of plain weave, not so fine as Habutai.

Khaki.—A colour resembling that of the ground. This word is derived from the Hindustani word for "earth." A term applied to a special shade of brown or greenish brown largely employed in soldiers' uniforms.

Ladies' Cloth.—A dress fabric of plain weave, similar to a Flannel in construction, but with a high-finished surface, which gives the fabric a Broadcloth effect.

Lappet Weave.—Lappet weaving is used to produce on a light fabric small designs which have the appearance of having been embroidered upon the fabric, such as the detached spots in dotted Swiss, or narrow and continuous figures running more or less in stripes. This form of weaving is used mainly on plain and gauze fabrics, and the figures are practically stitched into the fabric by means of needles in a special sliding frame. The yarn which produces the figured design is an extra warp thread known

as a "whip yarn." Lappet weaving produces the design on one side only of the fabric, and this feature will enable this style of weave to be recognised from other processes, such as Swiss Embroidery. The loose threads existing between the figures when the goods leave the loom are usually cut away, leaving a somewhat imperfect figure or spot with a bit of the figuring thread protruding at either extreme edge of the figure or spot. Lappet-figured fabrics are not Brocades.

Lastings.—A plain twill or kindred weave fabric firmly woven from hard-twisted wool or cotton yarns. Smooth in appearance but having a somewhat hard handle, Lasting is a fine, durable, generally piece-dyed, material, of which there are several varieties, such as the Printed and the Figured. It is sometimes employed in the making of uppers for boots and shoes.

Leas.—A term used to denote the count of linen yarn, each lea being a measure of length equal to 300 yards. When used with reference to cotton yarn, it is a measure of length equal to 4,320 inches, or 120 yards. See under Cotton Yarn Measures.

Leather Cloth.—This name is given to a cloth which is known in the Bradford district as a Melton. It is a union cloth woven from cotton warp and woollen weft having the warp threads running in pairs or, as it is called, in "sisters." Generally measuring from 50 to 56 inches in width and weighing from 20 to 24 ounces per yard, it is finished with a bright, smooth face. The system of interlacing of warp and weft is not apparent either on the face or back of the cloth. By pulling away one or two weft threads it is easy to see that the warp threads are of cotton and that they are in pairs. Leather cloth is free from any figuring and is generally dyed in dark colours.

Leno.—Where a fabric is woven with a combination of gauze weaving and a few plain picks it is said to be a Leno. It is a term now currently used to designate all classes of light fabrics into which the gauze weave (in which kind of weaving all the warp threads do not run parallel or at right angles to the weft but are more or less twisted round each other) is introduced in combination with any other kind of weave. Lenos may have either an "all-over effect" or "stripes." The introduction in Lenos of the gauze weave tends to strengthen a material which from its very nature can only be but light. Lenos may show, in addition to the "all-over effect," an extra weft figure or spot. Whilst all these would be known as Lenos, their more correct designation would be Figured Lenos, or Extra Weft Spot Figured Lenos. The term is now loosely used, and sometimes a "lace"

stripe Muslin will be called a Leno. The crossing threads used in the true or "net" Lenos are often of two or three fold yarn. The common so-called lace curtains are Lenos. The common varieties of Lenos are extensively used for the purpose of mosquito nets.

Liberty.—A light-weight silk having a satin finish. A trade name applied to a satin-finish silk of light weight now generally applied to such silks, although not the original "Liberty."

Linen Yarn.—When the count of linen yarn is given, it is denoted by "leas." Each lea is a measure of 300 yards, and 10 leas = 1 hank and 20 hanks = 1 bundle. It will be seen that as the "counts" increase, the weight per bundle decreases.

Lingerie.—This comprehensive term embraces ladies' and children's undergarments, such as skirts, undershirts, etc., infant's long and short dresses, stockings, chemises, night-robots, drawers, corset covers, etc.

Lining.—A cloth usually made from cotton warp and cotton, alpaca, or Botany weft, according to the type of cloth required, generally woven with a satteen weave. Italian Cloth is a typical example of lining cloth. The name denotes a class of fabrics rather than a given fabric.

Lisle Thread.—Yarns made of long staple cotton, somewhat tightly twisted and having a smooth surface produced by passing the yarn over gas jets.

Loading Worsted and Woollens.—When the natural weight of any fabric is artificially increased, it is subjected to a treatment called "filling," "loading," or "weighting." Wool fabrics, by reason of their great hygroscopic properties, are usually weighted by being impregnated with hygroscopic substances, such as magnesium chloride. Other agents employed for filling worsted and woollen goods are zinc chloride, dextrine, starch, and water glass (alkali silicate).

Zinc chloride is a most useful loading agent on account of it possessing great hygroscopic properties. When a wool fabric has passed through solutions containing this agent the chloride is absorbed and permanently retained in the form of moisture, and a slippery handle or feel is imparted.

Longcloth.—This name is used to designate a fine cotton fabric, either plain or twill woven, of superior quality, made from a fine grade of cotton yarn of medium twist.

The fabric is used for infants' long dresses, from which it derives its name, also for lingerie. Longcloth to some extent resembles Batiste, fine Muslin, India Linen, and Cambric. It is, however, distinguished from these fabrics by the closeness of its weave. It has, when finished, a very good white appearance, due to the closeness of the weave and the soft twist of the yarn. The surface is rendered smooth by undergoing a "gassing" process.

Long Ells (Woollen).—This name is given to an all-wool twill-weave fabric woven with a worsted warp and a woollen weft, averaging in width from 28 to 30 inches and having a length of 24 yards to the piece. Calendered, finished, and often dyed a bright vermilion. Long Ells averaged in value during the 10 years 1904-14 about 17s. per piece. They are not met with in a large range of qualities, the most usual type answering to the above description.

Long Stick.—This term is used to describe a yard of $36\frac{1}{2}$ inches in length. The abbreviated manner of writing this term on documents referring to textiles is L.S. It is only used in connexion with textile fabrics and in opposition to "short stick," a yard of 36 inches. One authority states that "the yard is generously reckoned at 37 inches by manufacturers in the United Kingdom." This statement, however, should be taken with reserve, although in the woollen trade it seems to be a common practice. In addition to this extra 1 inch per yard, a quarter of a yard in every 10 is generally allowed, so that a nominal 40-yard piece would actually measure 40 yards + 40 inches + 1 yard = 42 yards 4 inches. The long stick measure is only used in the woollen trade.

Louisine.—A silk fabric having an uneven surface like that of an Armure, but finer in effect.

Lustre Dress Fabrics.—This class of union fabric, when woven with a fast black dyed cotton warp and a worsted mohair weft, is representative of union fabrics in general, and the treatment of this material when in its grey state applies to the majority of union fabrics. The warp is generally a 2/80s, i.e., a strong yarn, and the weft, say, a 1/14s. The warp being dyed prior to weaving, there only remains the weft to be dyed after the unfinished cloth leaves the loom. This is called cross-dyeing. The grey cloth, in its loom state, possesses a visible appearance of non-lustrous cotton. This appearance is changed and replaced by the lustre effect through the process of "crabbing," or drawing out the material in the direction of the cotton warp. The warp

threads when drawn straight virtually throw the lustrous weft to the surface, whilst they themselves become embedded out of sight in the cloth. Orleans, Mohair Brilliantine, and Mohair Sicilian are fabrics which come under this heading.

Maco.—Applied to hosiery or underwear made from pure Egyptian undyed cotton.

Madapolams are all-cotton plain-weave bleached Shirtings or Calico cloths.

Madras.—A light-weight cotton fabric or a cotton and silk mixture sold in widths varying from 27 to 32 inches, usually made from dyed yarns. Extensively used to designate light weight shirting materials as used for men's shirts, the term is equally applied to similar weight fabrics printed in simple designs frequently elaborated in weaving by stripes or figures woven on a dobby loom. In the distributing trade, comprising various subdivisions of the trade, the names Madras, Gingham, Madras Gingham, Zephyr, etc., are so closely allied as to be impossible of separation. The original intent of these several designations has apparently been completely lost. Madras may either be woven as a plain or twill or kindred weave fabric. Whilst this name is primarily applied to an all-cotton fabric, it is also used to designate a cotton and silk mixture, when it is sometimes described as a Silk Gingham. The salient characteristic of Madras is the plain white and fancy coloured narrow stripes running in the direction of the warp.

Madras Gingham.—This name is applied to all cotton fabrics made in part or to a considerable extent of dyed yarns of various colours, woven into stripes or checks woven either plain or fancy or with a combination of two or more weaves, and of a weight distinctly suitable for a shirting material in countries lying in the temperate zone. In the United States the introduction of a leno or satin stripe for the purpose of elaboration or ornamentation does not change the trade designation of such Gingham. Madras Gingham may be woven either plain, diamond, gauze and leno weave, or a combination of these weaves. See Madras.

Madras Handkerchiefs.—Plain-woven coloured cloths, with large bold checks. The yarns are dyed with a loose top, and the cloth is treated with acids, which cause the colours to bleed or run and give an imitation of block printing.

Maline.—A fine silk net of gauze-like texture. Practically the same as Tulle.

Market Descriptions of Standard Cloth.—Certain standard cloths are known on the market by an expression such as "36—76, 19 × 22, 32/36". This stated at length means that the cloth is 36 inches wide, 76 yards long, and contains 19 "ends" (or warp threads) and 22 "picks" (or weft threads) per quarter inch, whilst the twist (or warp) is 32's and the weft 36's—all being actual, not nominal, particulars.

Marl.—A term applied to a particular kind of coloured two-fold or single yarn. In the former (the two-fold) one or both threads making the two-fold yarn are spun from two rovings of different colours, causing the single thread to have a twist-like appearance; or the process may be begun earlier, by the two colours being run together in the thick roving, thus producing a twist-like effect in the smaller roving immediately preceding the spinning. These single twist-looking threads are usually folded with a solid colour, frequently black. If folded with each other they are called Double Marls; a single-yarn Marl is this yarn without the folding.

Marquisette.—A sheer plain-weave fabric of silk or cotton, having a mesh more open than that of Voile.

Matelassé.—A heavy compound-weave figured cloth, having a raised pattern, as if quilted or wadded.

Matt Weave.—Similar to a plain or one-over-one weave, with this difference, that instead of lifting one thread at a time two are lifted over two. It might be described as a double plain weave. This style of weave is noticeable in some varieties of embroidery canvas.

Medium Cloth (Woollen).—This is an all-wool fabric, plain woven from a wool weft and wool warp. In width it varies from 54 to 74 inches and in length from 19 to 36 yards per piece. The average value of this fabric per yard for the period 1904 to 1914 was 4s. 3d.

This fabric approximates to, and by some is said to be identical with, Broad, Habit, and Russian Cloth.

Mélange.—The French word for "mixture". Name given to a yarn produced from printed tops. This class of yarn can be distinguished from Mixture Yarn in that many fibres have more than one colour upon them. In Mixture Yarn each fibre would only have one colour.

Melton.—Stout, smooth woollen cloth, similar to Broadcloth, but heavier. A heavily milled woollen in which the fibres have been raised, then the piece cut bare to obtain the typical Melton. Both light and heavy Meltons are made with cotton warp and woollen weft.

Mercerised Cotton.—Cotton fibre roughly resembles a tube which, being hollow and collapsed on itself, presents an uneven, twisted, tape-like appearance with a good many surface markings.

By chemical treatment (mercerising) with caustic soda, and the application of tension at the right period of the treatment, remarkable changes in the structure and appearance of the cotton fibre are produced. It is made to swell, to become more transparent, to lose its twisted tube-like appearance, and to become more lustrous, translucent, and elastic. Mercerised cotton gives an impression of silk to the naked eye, its microscopic appearance being changed, the fibre having swelled out and assumed a rounded rod-like appearance which, whilst resembling silk, still differs from silk by the absence of the characteristic swellings so distinctive to silk.

The mercerising process improves the dyeing properties of cotton. The most effective mercerisation is obtained with Egyptian cotton.

Mercerising.—The object of this very important operation in the manufacture of cotton goods, yarn, or cloth is to give them lustre, making them resemble silk, the use of which they have replaced in many instances. The process, which takes its name from the inventor (Mercer), consists of passing the yarn or cloth, preferably bleached or partially bleached, through a concentrated solution of caustic soda, which causes the straightening of the cotton fibres, and would also cause it to shrink considerably were it not for the fact that the material being treated is kept under tension, which prevents the shrinking. To this tension more than anything else is the lustre imparted due. Mercerising is only applicable to vegetable fibres. Animal fibres dissolve in caustic soda. The caustic soda solution is only allowed to react on the fibre for about two minutes, when it is washed out by abundant application of fresh water. See Mercerised Cotton.

Merino.—Applied to hosiery or underwear made of part cotton and part wool mixed together. (*Note.*—The word "merino" on a box label is often misleading, as it frequently happens that goods so called are composed wholly of cotton.)

Mesh Underwear.—All knit underwear cloth is mesh in varying degree, but the common application of the term means a woven or knitted fabric having a net-like appearance.

Messaline.—A light-weight satin of fine quality.

Mixture Yarn.—This class of yarn is spun from fibres which have previously, and separately, been dyed various colours. The fibres are then mixed together to produce the desired mixture tone and spun in the usual way. This class of yarn differs from Mélange Yarn, which is composed of fibres upon which more than one colour has been printed.

Mock Leno.—Mock or imitation Lenos are ordinary woven cloths, that is, the warp threads do not cross each other, the open effect being less pronounced than in the real Leno, resulting in a fabric which is not as strong as the real or true Leno.

Mock Seam.—Applied to stockings made with cut leg and fashioned foot.

Mohair is a lustrous wool obtained from the Angora goat. The hair is often pure white, fine, wavy, and of good length, being the most lustrous of the wool or hair class fibres. It is extensively used in the manufacture of Plushes and lustrous dress fabrics. The name Mohair is used to designate a lustrous fabric made from this class of material.

Mohair Beaver Plush.—This fabric is a pile-weave material having a long lustrous mohair pile and a cotton back. The mohair pile is generally a "fast" pile in the sense that it is firmly held to the back. The pile is not as lustrous as a silk pile or even a good mercerised cotton pile, but it will not crush as readily as the latter. Generally measures from 48 to 50 inches in width and 60 yards in length. To prevent crushing of the pile, this material is shipped on an iron frame, on which it is fastened by a series of hooks which hold the material by the selvages. Generally packed two frames to the box or case. The backs of mohair pile fabrics show a certain amount of loose pile fibres which have worked through during the process of weaving. This is not found in either silk or cotton pile fabrics.

Mohair Brilliantine.—A typical lustre dress fabric, plain woven, free from ornamentation, cotton warp and mohair weft; width, 30 to 31 inches; length, 30 to 35 yards per piece. Finer in weave appearance than Lustre Orleans, with a fairly extensive range of qualities. Like most lustre fabrics, it is cross-dyed.

Mohair Coney Seal.—A long mohair-pile fabric, dyed black, in widths of from 48 to 50 inches. The pile of this fabric is mohair, the foundation cloth all cotton. Harsher to the touch than a silk-pile fabric, Mohair Coney Seal has, as a distinctive feature, a fuzzy appearance at the back due to the fact that certain of the pile fibres appear to have worked through. If a similar fabric were dyed brown instead of black, it would be known as a Mohair Beaver Plush. If a similar fabric were dyed black and the surface chemically bleached till the dye was all out, producing a pile dyed two-thirds black and the surface third white, it would be known as a Silver Seal or Chinchilla Plush.

Mohair Sicilian.—Similar in construction of weave and components to a Mohair Brilliantine and differing from this only by the relative coarseness of threads. Sicilian is three times as coarse as Brilliantine, presenting a surface in which the warp and weft intersections are clearly shown, whereas the Brilliantine, being so much finer woven, does not show these so clearly, presenting as it does a smoother surface. The weft threads in Sicilian are comparatively much coarser than the warp, whereas in Brilliantine this difference is not so apparent. In width Sicilian measures up to 54 inches and in length from 30 to 35 yards per piece.

Moiré.—A watered design applied to silks by pressure between engraved rollers, or by the more common process of pressing two fabrics together. See Watering.

Moleskin.—An all-cotton Fustian, made extra strong by crowding the number of picks to the inch, napped before dyeing and put to the same uses as a strong Corduroy.

Mottles.—A variety of Velveteen or Velveteen Cord woven with a pile surface showing a distinct combination of yarn-dyed pile threads. Generally found with a pile combining black and white weft-pile threads; Mottles are yarn-dyed fabrics.

Mousseline de Soie.—A sheer soft fabric of silk, similar to Chiffon, but of more open weave.

Mule-twist Yarn.—Mule-twist yarn can be spun up to the finest counts; it is softer and more elastic than ring-twist yarn; it will take up more "size" than ring-twist and, generally speaking, is more regular in construction.

Mull.—A thin plain fabric usually bleached or dyed, characterised by a soft finish, used for dress wear. Various prefixes, such as Swiss, India, and Silk, are used in conjunction with Mull. Silk Mull is made of cotton warp and silk filling, and generally of higher count, finished either dyed or printed. The Swiss and India Mulls are fine, soft, bleached cotton fabrics; Silk Mull is in point of texture twice as fine as some grades of Cotton Mull. Cotton Mull is a plain fabric free from any ornamental features or fancy weaves, depending for its beauty or attractiveness entirely on the finish. When coarse-grade Mull, intended not for dress wear but for decorative purposes, is made, it is woven coarser than the dress fabric, stiffened in the finishing, and commonly known as Starched Mull. It is 30 inches wide, and has 36 picks and 40 ends per inch. Cotton Mull is generally woven from bleached yarns and not bleached in the piece.

Mungo and Shoddy are wool products or wool fibres which have previously passed through the process of manufacture.

Before either Mungo or Shoddy is produced, the rags, tailors' clippings, pattern-room clippings, or samples from which they are made have to be dusted, sorted, and ground. The last process tears thread from thread and fibre from fibre, leaving the Mungo or Shoddy ready to be once more made up into a yarn. The name is applied to textiles made up wholly or in great part from Mungo or Shoddy.

There actually exists a technical difference between Mungo and Shoddy, due to the class of fabric from which they are made. Mungo is the product of all types of cloths which have been subjected to the milling process. Shoddy is the product of unmilled fabrics, such as flannels, stockings, wraps, etc. Mungo is usually shorter and finer in fibre than Shoddy, because, in the first place, milled cloths are nearly always made from the shorter kinds of wool; secondly, because the fibres of a milled cloth are very difficult to separate from one another and break in the process of pulling.

Both Mungo and Shoddy are rather more comprehensive terms than names for any special type of material; both classes have a number of special divisions with different names.

Nainsook.—Nainsook is a light cotton fabric of plain weave which has a very soft finish. It may be distinguished from fine Lawns, fine Batiste, and fine Cambric from the fact that it has not as firm a construction nor as much body, and for that reason is not capable of retaining as much finishing material, the result being that when finished it has a very soft feel when handled. In width it ranges from 28 to 32 inches and in length from 20 to 60 yards per piece.

Nankeen.—The original Nankeen fabric was produced in China and was a plain-weave cotton fabric woven on a hand loom from a cotton yarn which had a natural yellow-coloured tinge. The name is now given to a cotton cloth produced in Lancashire, woven as a three-shaft twill and dyed a yellowish drab and other colours, often used for corset-making.

There is a mass of evidence to show that true Nankeen is a class of cloth having as a salient characteristic an inherent peculiar colour which is natural and due to its being woven from cotton of a yellow-brownish tint. The following extracts bear on this point.

"The statement that this stuff was made from a cotton of brownish yellow tint was for a long time discredited, but it is now certain that the yellow preserves the colour of the cotton composing it rather than acquires it by any process of dyeing" (S. William Beck: "Textile Fabrics: Their History and Applications").

Sir George Staunton, who travelled with Lord Macartney's Embassy through the province of Kiangnan, to which province the Nankeen cotton is peculiar, distinctly states that the cotton is naturally "of the same yellow tinge which it preserves when spun and woven into cloth" ("Embassy to China," by Sir George Staunton).

Sir George Thomas Staunton (son of the above) has translated an extract from a Chinese herbal on the character, culture, and uses of the annual herbaceous cotton plant, in which the plant producing "dusky yellow cotton" of a very fine quality is mentioned as one of the varieties ("Narratives of the Chinese Embassy to the Khan of the Tartars").

Van Braam, who travelled in China with a Dutch Embassy and who had been commissioned by European merchants to request that the Nankeens for their markets might be dyed a deeper colour than those last received, says: "La toile de Nanking, qu'on fabrique fort loin du lieu du même nom, est faite d'un coton *rouandtre*: la couleur de la toile de Nanking est donc naturelle, et point sujette à pâlir" ("Voyage de l'Ambassade de la Compagnie des Indes Orientales Hollandaises vers l'Empereur de la Chine").

"Each family (at Woosung) appears to cultivate a small portion of ground with cotton, which I here saw of a light yellow colour. The Nankeen cloth made from that requires no dye" ("Voyage of the Ship *Amherst* to the North-east Coast of China, 1832," published by order of the House of Commons).

Other authors refer to a Nankeen-coloured cotton grown in India and state that the original Nankeen fabric was produced in Nanking, in China, and was woven from a natural-coloured yellow cotton. As produced in Lancashire the cloth is a closely woven

three-shaft twill, dyed yellowish drab and other colours and used for stay and corset making and for pocketing.

An American Government publication (House of Representatives Document No. 643: Report of the Tariff Board on Schedule 1 of the Tariff Law) gives the general description of Nankeens as known in the distributing trade as: "Distinguished by their peculiar yellowish brown colour, natural to the colour of the cotton of which made."

From the above it would seem clear that true Nankeen is a plain native cotton cloth woven on a native hand loom from unbleached and undyed yarn spun from cotton of a yellowish or yellow-brownish natural colour. The weave of Nankeen is a plain one-over and one-under shirting weave, such being the type of weave most readily produced on a native hand loom. The finished fabric is marketed in its loom state.

True Nankeen is therefore devoid of any ornamentation or figuring produced by weave or subsequent printing, embossing, dyeing, or stencilling. The width of Nankeen has apparently been always recognised as not exceeding 20 inches.

The name Nankeen in China was originally used to describe native hand-loom cloths of the above variety only, but as new and slightly different makes of native cloth appeared on the market the practice grew of including them under this heading, until gradually the term was used to describe not only the true Nankeen but a whole group of native cloths answering to the following description: all-cotton cloths not exceeding 20 inches in width, woven on a hand loom with a one-over and one-under shirting weave from cotton yarn which has not been previously dyed or mercerised, and including cloths of the above variety which have either been bleached, piece-dyed in solid greyish or blue colour, or woven from yarn previously dyed in greyish or blue colour, and including hand-loom-woven grey or bleached cotton cloths not exceeding 20 inches wide which have been ornamented by the introduction in the weave of a yarn-dyed blue stripe or yarn-dyed blue checkered design.

This loose application of the term continued until the 2nd May 1917, when the Chinese Maritime Customs, in their Notification No. 876 (Shanghai, 2nd May 1917) laid down an authoritative definition of this class of piece goods reading as follows:—

The cloth must be of plain shirting weave, woven on a hand loom of the old style; it must not exceed 20 inches (English) in width.

The "count" of the yarn (whether Chinese or foreign) from which the cloth is made must not exceed 20's. The yarn must be single in both warp and weft; it must not be "gassed."

3. The cloth may be of the natural colour, *i.e.*, undyed, or it may be bleached or dyed in the yarn. It must not be dyed in the piece.

Chinese Cotton Cloth that does not fulfil the above conditions will not be treated as Nankeen.

Noils are the rejected fibres from the process of combing the different wools and hairs prior to making them up into yarn. The primary object of combing is to sort or separate the long from the short fibres.

Ombre.—Having graduated stripes in colour effect which shade from light to dark.

Opera Hose.—Women's stockings of extra length ordinarily measuring 34 inches.

Organsine.—This name is given to a hard and strong finished silk thread which has been given a great deal of twist in the throwing. Organsine is used for warps, as strength and regularity are needed in warp threads so that they may bear the strain and friction of weaving. When silk is thrown with less twist, and is therefore softer and more or less flossy, it is known as Tram and is used for the weft in weaving.

Orleans.—This fabric, also known as a Lustre Orleans, is one of the many varieties of lustre dress fabrics met with and described elsewhere. Woven with cotton warp and lustre weft, free from ornamentation, it is a simple one-over and one-under plain-weave fabric. Average width, 30 to 31 inches; length, 30 yards; price in normal times averaging, for the usual type, as low as 8½d. per yard.

In fineness of appearance it lies midway between a Mohair Brilliantina, which is of finer weave, and a Mohair Sicilian, which is of similar weave, coarser, but more lustrous in appearance.

Ottoman.—A silk or cotton weave having thick ribs at various intervals. Originally, the thick cord ran crossways. When the cord runs lengthways the fabric is often known as an Ottoman Cord.

This material is also called a Persian Cord, which is a cloth made from worsted or cotton warp and worsted weft employing the plain weave, but with the warp threads working in twos, thus giving a rib effect.

Outsize.—When used as a knitted goods term it is applied to women's stockings made in extra widths.

Oxford.—Originally a wool fabric in dark grey and white mixtures. Of late years heavy cotton and linen fabrics have been known by this name.

Oxford Shirting.—This fabric is an all-cotton fabric woven with a plain-weave ground and ornamented by the introduction of broken twill or fancy twill weave. It is woven with white and coloured yarns, which go to make the pattern or design—which in the main takes the form of stripes—of broken twill weave running lengthways of the material. Where the design is produced by printing, the material would not be an Oxford Shirting, but would more correctly be classed as an "imitation" or "printed" Oxford.

Oxford Shirting has been described as "a matt weave of coloured yarns, forming small checked effects or basket effects." As the name shows, it is extensively used in the making of shirts and ranges in quality from a low-grade to a high-quality fabric.

Padded Back Linings.—When a fabric is printed black on one side, or backed, to prevent the printed pattern on the face of the cloth from showing through, it is known as a Padded Back Lining. A natural back lining is a solid-coloured lining printed on one side only. This class of fabric is generally woven from all-cotton yarns, but may include fabrics which contain wool, silk, or other fibres.

Pad-dyeing.—Fabrics are generally piece-dyed after leaving the loom by being immersed in a bath of dye or colouring material. With a view to quickening more than actually cheapening the process of dyeing, "pad-dyeing" was evolved. This roughly consists in threading the cloth to be dyed into a machine the main features of which are dye baths and rubber rollers. The cloth is made to pass over rollers, dip into a dye bath and pass through rollers which squeeze out the superfluous dye, allowing same to fall back into the dye bowl or bath. In "pad-dyeing" the cloth may pass as often as six times through the dye liquor before it enters the first set of squeezers, and it may be given as many as four more passes through the liquor before the second set of squeezers are gone through; this, according to experts, gives "thorough saturation to any and all goods difficult to penetrate." It is generally recognised that any degree of saturation can be attained by the process of pad-dyeing, and cloth may be run through a machine at the rate of some 275 yards per minute and yet be well saturated. In a description of a pad-dyeing machine the nature of the operation performed by this machine is called "dyeing" and not "printing." The only difference

therefore between piece-dyeing in a vat and in a pad-dyeing machine is that in the one instance the cloth is made to circulate in a dye bath or through a series of dye baths instead of being allowed to remain still in a dye vat until impregnated. The object aimed at and attained, *i.e.*, the saturation of the cloth with a dye or colouring liquor, is identical.

All fabrics showing thorough saturation of ground colour (*i.e.*, where both sides of the fabric are equally dyed) are considered as dyed whether they have been dyed by vat-dyeing or pad-dyeing.

Panne.—A light-weight Velvet with “laid” or flattened pile. Applied to a range of satin-faced Velvets or silk fabrics which show a high lustre, which is produced by pressure. The word *panne* is French for Plush.

Panung.—The nether garment of the Siamese. Made from cloth of the Papoon style or from woven or printed Checks. Papoon is a plain-woven cloth having warp and weft of different colours. It is also woven in two-and-two checking.

Panama Canvas.—An all-cotton plain matt weave fabric, similar to Basket Cloth, but woven from dyed yarns.

Papoon.—An all-cotton fabric woven from coloured yarns, the warp being of a different colour to the weft or filling threads. Exported to Siam, where it is extensively used for panungs.

Paramatta.—A thin union fabric woven as a three-shaft weft-faced twill from cotton warp and Botany worsted weft, used extensively for the manufacture of waterproof articles.

Pastel.—Applied to tones of any colour when exceptionally pale.

Pastille.—A round or oval spot.

Peau de Cygne.—A closely woven silk having a lustrous but uneven surface.

Peau de Soie.—A closely woven silk having a somewhat uneven satin-like surface. Literally, “skin of silk.” A variety of heavy, soft-finished, plain-coloured dress silk woven with a pattern of fine close ribs extending weftways of the fabric. The best grades are reversible, being similarly finished on both sides; lower grades are finished on one side only. The weave is an eight-shaft satin with one point added on the right, or left, imparting to the fabric a somewhat grainy appearance.

Pekiné, or Pekin Stripes.—A colour design in stripes of equal width and with equal space between.

Pepperell Drill.—The very superior qualities of Drills, woven from the highest quality yarns, are distinguishable by their carefully woven appearance and known as Pepperell Drills.

Percalé.—A plain-weave cotton fabric of fine or medium count, used for shirtings, dresses, linings, etc. Percale is usually printed on one side with geometrical figures, generally black, although other colours are sometimes used. The fabric is bleached before printing and has an entire lack of gloss, differing from Percaline, which has a very glossy finish. It is often printed in stripes and, when so printed, is known as Percale Stripes.

Percaline.—A highly finished and dressed light-weight Percale, piece-dyed in solid colours and not printed. Percaline is an all-cotton, plain, closely woven fabric, generally met with in shades of blue, green, black, brown, and tan. Highly calendered and glossed.

Persian Cord.—A worsted or cotton warp and worsted weft fabric woven with a plain weave, but with the warp threads working in twos, thus giving a rib effect. Also called Ottoman.

Pick.—When the word "pick" is used in connexion with weaving, it always signifies the filling or weft threads, while each warp thread is called an "end" or a "thread." Picks run across the width of the fabric.

Piece Goods.—A usual trade reference for fabrics which are woven in lengths suitable for retail sale by linear measure.

Pile Fabrics.—Materials of silk or cotton wherein the surface is woven with raised loops, which are afterwards cut, forming a raised "pile." They include Plushes, Velvets, Velvetens, and Corduroys.

The threads that go towards making the pile are special threads independent of the warp and weft threads necessary to make a fabric that will hold together.

If the raised loops are left uncut, as more frequently is the case with warp piles, the fabric is spoken of as "Terry." If cut, as is sometimes the case with warp piles, and usually the case with weft piles, the fabric is spoken of as "cut-pile."

A generic name, used more in the elementary distributing trade, covering the classes of goods known amongst retailers and consumers as Velveteen, Corduroy, Turkish Towelling, Plush, etc.

Pile Weave.—Numerous varieties of cloth woven with a pile surface, such as Plush, Velvet, Velveteen, Silk Seals, Pony Skin, Beaver, Chinchilla Plush, and Carpeting of various kinds, are produced by this style of weave. The distinctive feature of this weave is that the surface consists of threads standing closely together like bristles in a brush. These threads appear either as threads sheared off smooth, so as to form a uniform or even surface, as in the case of Velvet, or may appear in the form of loops, as in the case of Towelling. The threads forming the pile are fixed to the back in a more or less firm manner and are known as "loose" or "fast" pile: the former takes the form of the letter **U** and the latter of the letter **W**. The loose pile may be driven out of the material by pressure, as there are not the same binding threads holding it as in the fast pile, or, again, they may be drawn out through the back of the material by relatively little scratching with, say, the edge of a paper-knife. The fast pile cannot be so withdrawn, as one of the warp threads passes in each of the two surface depressions as well as under the centre bend of the **W**, thus firmly binding it to the cloth. All other conditions being equal, a fast-pile material would be the better and more expensive of the two, and for upholstery or where there is much wear the "fast" pile is essential. Pile-weave materials are shipped on iron frames of about 60 yards, the material being hooked on to the frame by the selvedge so as to prevent the crushing of the pile. For export two frames are boxed together, separated by a wood partition.

Piqué.—A stout cotton fabric having as a distinguishing feature wide or fine welts, running "lengthways in the piece" and extending side by side from selvedge to selvedge. It is woven in the unbleached state and bleached before being placed on the market. It is also made in part of dyed yarns, forming ornamental stripes. It is sometimes referred to as Welts or Bedford Cords. This fabric is described in the English market as a fabric having "transverse ribs or welts, produced by stitching tightly weighted warp threads through a fine plain-woven cloth which has its warp lightly tensioned. The ribs or welts are sometimes emphasised by the introduction of wadding welt." In America this material is sometimes described as "P.K."

P.K.—An American way of writing Piqué. This abbreviated designation of the word is limited to America and seldom met with on English invoices.

Plain.—As a weaving term the word “plain” is used to designate the simplest weave, in which the weft thread passes under one and over one warp thread. This system of interlacing produces a “plain” or “one-over and one-under” or “shirting” weave. The term is also used to denote that a fabric is not figured, i.e., that it is free of ornamentation produced by either extra threads or combination of weaves.

Plain Velvet (Cotton).—An all-cotton pile fabric, which is more often known under the name of Velveteen. There would appear, however, to be a difference between the two fabrics, which lies only in the length of the pile, the pile of Velvet being if anything a little longer than that of Velveteen and shorter than that of Plush. This fabric may, like Velveteen, be either of a weft or warp pile weave, which is more fully described under “Velveteen.” Being plain, it is free from any ornamentation produced by printing, embossing, or combination of weave, and of uniform colour throughout the width and length of the material.

Plain Velveteen (Cotton).—This fabric, like all true Velveteens, is an all-cotton pile fabric which has not been ornamented or figured in any way, either by being printed or embossed or by combination of weave, and would be of uniform colour throughout the width and length of the material.

Plain (or Homespun) Weave.—Plain cloth is the simplest cloth that can be woven. In this weave one series of threads (filling or weft) crosses another series (warp) at right angles, passing over one and under one in regular order, thus forming a simple interlacement of the threads. This weave is used in the production of Muslin, Gingham, Broadcloth, Taffetas, etc.

Checks are produced in plain weaving by the use of bands of coloured warp and coloured filling. This weave produces a strong and firm cloth. It is also called calico or tabby weave, and referred to as a “one-over and one-under” weave.

Plated.—An American term used in connexion with goods having the face of one material and the back of another; for instance, a garment having a wool face and cotton back is “plated.” The face may also be of one colour and the back of another, both of the same material.

Plissé.—French for pleated; applied to fabrics which have as a distinctive feature a narrow lengthways fold like the pleats of a closed fan. Also known as Tucks.

Plumetis.—A sheer cotton fabric ornamented with tufts at intervals. A Figured Muslin or Lawn of high quality and price which shows on its face dots or small sprigs of flowers which closely imitate real hand embroidery. These designs are the result of swivel figuring. This fabric is also known as Plumety.

Plush.—As a distinctive fabric Plush would appear to be a pile fabric having a fairly long pile woven on the same principle as Velvet, but composed of wool, mohair, or mixed fibres, and sometimes from a silk pile and cotton back. Used as an adjective, the word "plush" would mean woven with a pile somewhat longer than Velvet. It is generally used in conjunction with a prefix showing the nature of the materials from which the pile is made.

It is generally recognised that Plushes and Velvets are so generally part cotton that a Silk Plush should be considered as having a cotton back unless it is definitely stated that it is "silk backed." This practice is recognised by manufacturing, wholesale, and retail branches of the trade and is accepted by such authorities as Paul H. Nystrom and recorded in his book, "Textiles."

Plush of Silk mixed with other Fibres.—This class of material includes all pile fabrics which, in the first instance, answer to the description of Plush, *i.e.*, have their pile longer than that of Velvet, and the pile of which, whilst being partly of silk, contains other animal fibres such as wool or mohair and which may contain even vegetable fibres such as cotton. In Plushes belonging to the above class the nature of the back or foundation cloth may vary, but in the great majority of cases they would be found to be of cotton. Where it is clearly stipulated that they are "Plushes of silk mixed with other fibres and having cotton backs," the foundation cloth must not contain warp or weft threads wholly or in part composed of any material other than cotton.

Plush Velveteen.—A plain all-cotton pile fabric, either weft or warp pile, but generally the former, which differs from Velveteen only in the length of the pile. As the name Velveteen stands for "an all-cotton fabric," it would be as correct to describe a Plush Velveteen as "an all-cotton Plush" or as a "long-piled Velveteen." The terms Plush and Velveteen are explained elsewhere.

Pointillé.—Having a design in small dots.

Pompadour.—A term used to describe small floral designs in silk fabrics.

Poncho Cloth.—This name is apparently more used to describe a class of fabric than a particular and distinctive material. Used presumably in the manufacture of Ponchos, which are blanket-shaped garments having a slit in the centre through which the head is passed, and extensively used in Mexico. Poncho Cloth was originally a fine all-wool fabric.

Poncho Cloth is now described as a union cloth, i.e., composed of two materials, such as wool and cotton, otherwise than by blending. It is also similar to what is known as Leather Cloth, produced in the Morley district, which is heavier than the boiled and teased goods known in that district as "Unions." True Poncho Cloth is a union cloth woven with cotton warp and woollen weft, measuring from 72 to 74 inches wide and having a distinctive 1-inch hair list at each selvedge. It resembles but is lighter in weight than a Union or Leather Cloth, averages from 16 to 20 ounces per yard, and is given a high finish on the face. In the Bradford district such a cloth would be known and sold as a "Melton" unless shipped as a Poncho Cloth at the request of the buyer.

Pongee.—A fine plain-woven cotton fabric, mercerised, dyed, and schreinered, having a soft handle or feel like the real Silk Pongee of which it is an imitation. Pongees are met with having stripes produced by coloured warp threads. The fabric has a lustrous silky appearance. Average width, 28 inches. The ground colour of Pongees is most often of a shade similar to real Silk Pongee.

Pony Skin.—As a textile term, it is used to describe a pile fabric which is made to imitate the true Russian Pony Skin fur. Always dyed a solid black, this fabric has a mohair pile which has been laid and fixed by heat. The density of the pile and the lustre are the best guides to value. Like many imitation fur fabrics, it came into the market owing to the vogue of the real fur it imitates. Average width, 48 to 50 inches; length, 30 to 33 yards per piece.

Poplin.—A fabric having a silk warp and a wool weft, with a corded surface. Goods in which a similar effect is produced, but made in all silk, all wool, or cotton, are also called Poplins.

It is a warp-ribbed fabric with a plain weave and was originally made with a fine silk warp and a comparatively thick gassed worsted weft which gave the ribbed effect, with the silk warp threads thrown to the surface and completely hiding the worsted weft. It is similar to, but generally softer finished than, Repp or Rep.

Printed.—This term, when used with reference to textiles, indicates that the fabric has been submitted to a process whereby certain designs, either simple or complex, have been impressed on the surface of the fabric in either one or more colours. Calico is perhaps the most typical of printed fabrics. The printing of fabrics is generally done by the aid of a machine, its main feature being a revolving cylinder on which the design has been stamped or cut out. The cloth in passing through the machine comes in contact with the impression cylinder. The cylinder revolving in a colour trough takes up the colour and leaves the impression of the design on the cloth. When fabrics are printed by hand from blocks, the design never joins so perfectly that it cannot be detected, and, if looked for, certain marks will be found that are used as "guides" to show the operator where the next impression with the block is to be made. Roller-printed designs, being continuous, show no such marks or irregularities.

A recent process known as the "Lithographic" or transfer process has been introduced, and it is a modified form of block printing, an engraved stone being used as for lithographic work.

A fabric that is printed will not show continuous coloured threads, but threads coloured in places and not in others; whereas in fabrics having the pattern woven the coloured threads are continuous.

An "indigo print" is distinguished from a regular print by having a printed figure on a solid indigo blue ground, whereas the ground of an ordinary print-cloth pattern is white or of a light colour. An indigo-print pattern is obtained either by indigo block printing, indigo discharge printing, or indigo resist printing.

Printed Balzarines.—The general structure and appearance of Balzarines is given under that heading. The cotton variety would be an all-cotton fabric having a gauze weave and net-like appearance. The printed variety would consist of similar fabrics which had been subjected to a process whereby certain simple or complex designs had been impressed upon the surface of the fabric in either one or more colours. The fabric would approximate 30 inches in width and probably from 28 to 30 yards in length per piece.

Printed Calico.—This fabric is described under "Calico."

Printed Cambrics.—As the name shows, Printed Cambrics are Cambrics which have been submitted to a process whereby certain simple or complex designs in either one or more colours have been impressed on their surface.

Cambric being a light-weight, soft-finish, plain-weave fabric of linen or cotton, the term Printed Cambric is therefore applicable to either a linen or cotton fabric. The more correct designation would be either Printed Linen Cambric or Printed Cotton Cambric. The majority of Cambrics met with are Cotton Cambrics, and, unless specially designated, a Printed Cambric would be a cotton fabric. Whereas in the plain white a Cambric is finer than a Lawn, Printed Cambrics, on the other hand, are coarser than Lawns.

Printed Chintzes.—This fabric is essentially a multi-coloured printed cotton fabric. It is the style of printing and the large bright and gay coloured patterns of flowers and other subjects used for ornamentation of the fabric that are the distinctive features of this material, which is mainly used for curtains and furniture coverings. Chintz is but a plain-woven fabric elaborately ornamented with designs by means of the printing machine. After printing, the fabric is passed through a calender press, the rolls of which are well heated and tightly set, which gives the glazed finish which the fabric in most cases possesses.

Printed Cotton Drill.—A strong all-cotton warp-faced or warp sateen faced fabric which, after leaving the loom, has been suitably prepared for and subjected to a process whereby certain ornamentation in the form of simple or complex designs in either one or more colours has been impressed on its surface. For particulars of weave, see Drills; Florentine Drills; Satin Drill.

Printed Cotton Italians.—This name is given to an all-cotton fabric woven generally with a welt-faced satin weave having an even, close, smooth surface, upon which—for the purpose of ornamentation and to enhance the value of the fabric—certain simple or complex designs in either one or more colours have been impressed. Whilst the name of this fabric does not indicate whether it is a grey, white, or dyed one, nevertheless, as an Italian Cloth itself is a dyed cotton fabric, so a Printed Cotton Italian is a dyed and printed cotton fabric.

Printed Cotton Lastings.—This fabric is essentially a plain all-cotton twill or kindred weave fabric firmly woven from hard-twisted yarns, pre-dyed after leaving the loom, and subsequently subjected to a printing process whereby certain designs, whether simple or complex, are impressed upon the surface of the cloth in either one or more colours.

Printed Crape.—Any all-cotton Crape Cloth, which has been ornamented by having certain designs or patterns impressed upon its surface in one or more colours, is termed a Printed Crape. The crinkled appearance—which is the distinctive feature of Crape Cloth—remains unchanged in the Printed Crape. The various methods of obtaining this crinkled effect is given under "Crape Cloth, Plain."

• **Printed Crimp Cloth.** Any all cotton Crimp Cloth which has been ornamented by having certain designs or patterns impressed upon its surface in one or more colours is known as a Printed Crimp. The "cockled" stripes which are the distinctive feature of Crimp Cloth remain unchanged in the Printed Crimps. The method of obtaining these "cockled" stripes is given under "Crimp Cloth, Plain."

• **Printed Furnitures.** This name, like many others used with reference to textiles, denotes more a class of goods than any given fabric. Chintz, Cretonne, and any other printed cotton fabrics which enter into the manufacture of chair or sofa coverings, curtains, hassocks, screens, etc., may be termed Printed Furnitures. This name, however, seems to be unknown to both manufacturer and distributor, and it is not in use in any of the many branches of commerce concerned with textile fabrics. As a generic term it has its value; but if it was ever used as the name of any given fabric, it is so used no longer.

Printed Lawns.—As the name shows, Printed Lawns are Lawns which have been submitted to a process whereby certain simple or complex designs in either one or more colours have been impressed on their surface. Lawn being a light weight, soft finished, plain weave fabric woven from cotton yarns varying from 140's to 1100's or from a linen yarn, the term Printed Lawn is therefore applicable to either a cotton or linen fabric. The more correct designation would be either Printed Cotton Lawn or Printed Linen Lawn. The majority of Lawns met with are Cotton Lawns, and unless specially designated, a Printed Lawn would be a cotton fabric. Whereas a plain White Lawn is coarser than a White Cambric, a Printed Lawn, on the other hand, is finer than a Printed Cambric. It varies in width from 27 to 45 inches.

• **Printed Leno.**—When a Leno has been submitted to a process whereby certain simple or complex designs in either one or more colours have been impressed on its face, it is then known as a Printed Leno.

Printed Muslin.—As the name shows, Printed Muslins are Muslins which have been submitted to a process whereby certain simple or complex designs in either one or more colours have been impressed on their surface. Muslin, like Lawn and Cambric, is an open, plain-weave, light-weight, soft-finished cotton fabric. The better qualities of Muslin may be recognised by their evenness of weave and fineness of yarn, whilst in the lower grades occasional warp or weft threads will be irregular, having the appearance of being thicker in some parts than in others.

Printed Reps.—As the name indicates, this class of fabric is essentially of rep construction, i. e., having as a predominant feature a rep or rib running transversely across the face of the cloth, which is described in detail under "Rep." When a cloth or fabric of rep construction has had its face ornamented by having certain designs or patterns impressed on it in either one or more colours, it is known as a Printed Rep. This class of fabric is generally met with as an all-cotton fabric, and unless specially designated, the material so described would be a printed plain (in the sense of not figured) cotton fabric.

Printed Sateens.—These are essentially light weight cotton fabrics finished to imitate Silk Satin, and the common Italian Cloth is a sateen fabric. The ornamentation of Printed Sateens is the result of a printing process whereby certain designs are impressed on the surface in contradistinction to Coloured Sateens, in which the ornamentation is produced by combination of coloured warp and filling threads. *See also Sateens; Satin.*

Printed Satinets.—An imitation of the true Satin in mercerised cotton or other yarns which has been printed after leaving the loom. The four-shaft satin weave, which does not fulfil the conditions of the real Satin as regards order of intersections, is known as a satinet weave and is the basis of this class of fabric. Similar to Sateen, but somewhat lighter in weight.

Printed Sheetings.—This name is given to an all-cotton fabric woven either as a four-shaft two-and-two twill or with a plain weave, as in the case of low-grade sheetings, in which waste and condenser wefts are used. The actual fabric is woven as described under "Grey Sheeting," then "singled," "bleached," and "calendered" to prepare it for the process of printing, which consists of impressing on the face of the material certain designs in either one or more colours. This term is very seldom met with in the trade and is considered a misnomer.

Printed Shirtings.—Printed Shirtings are essentially an all-cotton fabric woven with a plain weave, having the warp and weft approximately of the same count, which have had their surface ornamented by being submitted to a process whereby certain simple or complex designs in either one or more colours have been impressed upon them. Printed Shirtings, like all other cotton fabrics, undergo a process of “singeing,” “bleaching,” and “calendering” prior to being printed. The first process removes the surface hairs, which form a sort of nap to the surface of the cloth, which if allowed to remain would interfere with the uniform application of the colours, and the other two processes further prepare the fabric for printing.

Printed T-Cloth.—This fabric is an all-cotton plain woven fabric, generally woven from poor-quality yarn, which, after leaving the loom, has been bleached and printed. This fabric answers the description of a Printed Calico and would by many be known under that name. Beyond the actual manufacturer, the jobber or exporter, and those merchants in such markets as Manchester and China where the term is currently used, few even in the textile business would know the value of the term T-Cloth.

Printed Turkey Reds.—Fabrics designated as Printed Turkey Reds are essentially all-cotton fabrics of good quality dyed turkey red (*see* Dyed Real Turkey Reds) and subsequently ornamented by having certain designs impressed on their surface in either one or more colours. They are usually plain woven or of small twill weave.

Printed Twills.—This term is applied to all cotton fabrics of twill weave, having the diagonal effect or twill running across the face of the fabric, which subsequent to being woven have been ornamented by having certain designs, either simple or complex, impressed on their surface in either one or more colours.

Printed Velvet (Cotton).—Like a Plain Cotton Velvet, this fabric is virtually a Velveteen, *i.e.*, an all-cotton pile fabric, which has been ornamented by having certain designs or patterns impressed on its face in either one or more colours.

Printed Velveteen (Cotton).—This fabric, like all true Velveteens, is an all-cotton pile fabric which has been ornamented by having certain designs, whether simple or complex, impressed on its surface in either one or more colours.

Printers.—Plain-woven cotton cloths either exported plain or more often used for printing. Burnley Printers, or "Lumps," are usually 32 inches wide by 110 yards in length and 16 square, i.e., 16 ends and 16 picks to the quarter inch. Glossop or Cheshire Printers are about 36 inches by 50 yards and average 19 ends and 22 picks to the quarter inch. Printers are generally well woven from pure yarns of good quality. A variety woven from low-grade yarns is also manufactured.

Pure Silk Plush.—A pile fabric, not often met with woven entirely from silk, i.e., having both pile face and back warp threads of silk. Woven as a Velvet but with a somewhat longer pile. Most branches of the trade consider a Pure Silk Plush to be a fabric having an all silk pile, irrespective of whether the foundation fabric is silk or not.

Paul H. Nyström, in his book, "Textiles," states that Velvets and Plushes are so generally part cotton that a Silk Velvet or a Silk Plush should be considered as having a cotton back unless it is definitely stated that it is "silk backed." The term "pure silk" when applied to a plush qualifies the pile of the fabric and not the fabric as a whole; it does not mean that the fabric is composed entirely of silk.

Pure Silk Velvet.—An all silk pile fabric, not often met with woven entirely from silk, similar to an all-silk Plush, from which it differs only in length of pile. The pile of Velvet is shorter than that of Plush. A Pure Silk Velvet is generally understood to be a pile fabric having an all-silk pile, irrespective of the nature of the foundation fabric. Velvets are so generally part cotton that a Silk Velvet should be considered as having a cotton back unless it is definitely stated that it is "silk backed." "Silk," or "pure silk," refers to the pile and the pile only, in the general acceptance of the trade, and not to the fabric as a whole; it does not mean a fabric composed entirely of silk.

Raised Back Cloths.—Fabrics requiring a "raised back" are usually warp faced and weft backed. By constructing the cloth in this manner, the raising machine, in the subsequent processes, partially disintegrates the weft fibres and gives that soft and woolly feel which one is accustomed to in such cloths as Swansdown, Cotton Trouserings, and some classes of fabrics used for dressing-gowns, pyjamas, etc.

Raised Cotton Cloth.—Any material woven in all cotton and having either one or both sides "raised" or "napped" would be a Raised Cotton Cloth. The "raising" or "napping" of the cloth is a process which the fabric is put through with the view

of giving it a soft "woolly" feel. By passing the fabric, whilst it is tightly stretched, over a revolving cylinder which has its surface covered with small steel hooks or teazels, the surface of the fabric is scratched and the short fibres of the yarn used in the weaving are opened up and raised, resulting in a nap covering the whole of the surface. Raised Cotton Cloths allow of the use of coarse inferior yarns and are better looking than had they not been raised. The raising hides defects of weave and produces a warmer, better-looking cloth than could be produced by any other process at the price. Raised Cloths, like certain Flannelettes, are sometimes chemically rendered "fireproof."

Ramie, Rhea, China Grass.—A fibre obtained from a plant of the nettle family which grows in India and China. The fibre is strong and lustrous and lends itself to the weaving of various materials, especially underclothing, and it is used also in the manufacture of incandescent gas mantles.

The diameter of ramie and china grass fibres is from two to three times that of flax. Ramie and china grass are not absolutely identical, the latter containing 78 per cent. of cellulose as compared with 66 per cent. in ramie. When spun into threads they produce a lustrous effect. Effects resembling silk-woven textures are produced with the finest yarns, and when dyed in delicate shades they give a brilliancy comparable with silk.

Ratine.—A wool material similar to a Clunchilla, but having smaller tufts with wider spacings between. This material is always plain woven and is of comparatively recent creation; it can be described as a very rough surface dress fabric, properly in part of wool, but now also made entirely of cotton. The characteristic rough surface is caused by the use of special fancy weft threads which are composed of two or more different size yarns so twisted together as to produce knob effects at intervals in the thread. A more expensive fabric is made of filling threads composed of braided yarns. The trade now applies the name to imitation effects produced by terry weaves, Turkish Towelling fabrics, bouclé and bourette effects.

Rayé.—This is the French term for "striped" and is applied to patterns running longitudinally with the warp in textile fabrics, produced by employing a special weave or two or more colours of warp specially arranged.

Reed and Pick are terms applied in the cotton industry to the number of threads in a given space—usually $\frac{1}{4}$ inch or 1 inch—in the warp and weft respectively. These terms are

not generally employed, however, in all textile districts; the term "make" or "ends and picks per inch" is applied to worsted cloths, whilst "sett" and "shots" are used with the same meaning in the linen industry.

The word "counts," which refers to the number or thickness of yarn, is sometimes erroneously used in this connexion, probably owing to the fact that the expression "counts to the 1-inch glass" is also used in reference to reel and pick.

Rembrandt Rib.—Applied to women's stockings having groups of five drop-stitches, separated by 1 inch of plain knitting running the full length.

Rep.—The name Rep is used to designate certain fabrics that have as a predominant feature a rep or rib running transversely across the face of the cloth. The term may also be applied to the actual weft rib which appears in the material.

Reps are what is known as warp-ribbed fabrics, *i.e.*, fabrics with the rib or rep running weftways, and for that reason may be considered the opposite of cords. The term "warp-ribbed" might at first sight appear to designate a rib running warpways, that is to say, in the longitudinal direction of the cloth, whereas a warp rib is a warp surface weave in which, owing to the thickness of the weft picks or to the grouping of a number of weft picks together, the warp threads are made to bend round them, and being thus thrown to the surface produce a ribbed appearance across the piece. Reps, unless specially designated, are dyed plain cotton fabrics with an average width of 32 inches and a length of 32 yards per piece.

Resist or Reserve Printing.—This style of printing is a process used to obtain white figures on a coloured ground by means of printing the designs in substances that are impervious to the dye into which the cloth so printed is subsequently placed. The cloth is dyed, but all parts of it which were covered by the resist agent remain white.

Reversible Cretonnes.—The salient features of Cretonnes are the bold type of highly coloured designs with which the fabric is ornamented through printing. The weave employed for this style of fabric is either plain, twill, satin, or oatmeal weave; the width of the material varies from 25 to 50 inches. Sometimes, though rarely, a small brocaded effect of fancy weave is introduced. Reversible Cretonnes differ from ordinary Cretonnes in that they are printed on both sides of the fabric. A recent variety of Reversible Cretonne, called a Shadow Cretonne, is purely a warp-printed fabric, sometimes containing yarn-dyed

threads. A Cretonne printed with the same design on face and back would be known as a Reversible Cretonne, whilst the same fabric printed with one pattern on the face and a different pattern on the back would be known as a Duplex Printed Cretonne.

Rib.—The name given to any kind of cord effect or to a weave in which either, owing to the interlacing or to the yarns used, warp or weft is the stronger and remains comparatively straight while the weaker does all the bending. Thus, in warp ribs the weft is the stronger and causes the warp to bend and form a warp surface rib running from selvedge to selvedge, while in weft ribs the warp is the stronger and develops a weft surface rib running lengthways of the piece.

Rib Crape Effect.—This term is used to designate the effect produced by breaking up the regular order of weave so as to produce a warp rib effect on a fabric which is of the Crape variety, the crape weave being distinguishable by the interlacing of warp and weft in a more or less mixed or indiscriminate order, so as to produce the appearance of a finely broken character. Rib crape effect is found in fabrics known as Creponne.

Richelieu Rib.—Applied to women's plain stockings having a single drop-stitch at intervals of three-quarters of an inch running the full length of the stocking.

Right and Wrong Side of Fabrics.—In certain goods it is difficult to tell the right from the wrong side. In plain worsteds the diagonal ought always to run from right to left, that being the right side. In all textiles which are not reversible, but are similar on both sides, the right side can be detected by the quantity of down, which is less on the right side than the wrong side. To determine this it is often necessary to hold the cloth under examination to the light. When both sides are well finished, but with different patterns, it is the neater of the two which is generally the right side. In a comprehensive way, shaviness and neatness indicate the right side.

Ring-spun Yarn.—Ring-spun cotton yarn is generally a harder spun thread than mule-twist, which is more fibrous and more elastic. Ring-spun yarn will take up as much "size" as the more fibrous and softer spun thread of the mule.

Ring-spun yarn is rounder than a mule-spun thread. Ring-spinning differs from mule-spinning in this essential: the former is spun on the "continuous system" upon spindles that are fixed, whereas in mule-spinning the spindles are mounted on a carriage

which moves backwards and forwards for a distance of some 5 feet. When the spindles reach their greatest distance the rolls producing the yarn are automatically stopped, and the thread that has been spun during the outward move of the carriage is wound on the spindles while the carriage is being moved back toward the rolls.

Robes.—A name given to printed twill cotton fabrics made from 64-square printing cloth. Originally made for use as wraps, they were made in Cashmere effects. Now, although made in large bright-coloured furniture coverings, curtains, etc., they still retain the name Robes when made from 64-square printing cloth.

Russian Cloth (Woollen).—An all-wool fabric, plain woven from a wool weft and wool warp, the weave being a plain one-over and one-under weave. Owing to the finish of the cloth, the weave is non-apparent. It varies in width from 54 to 74 inches and in length from 10 to 30 yards. It does not differ materially from Broad, Medium, and Habit Cloth. Average value for period 1904 to 1914, 48. 3d. per yard.

Russian Prints.—This class of fabric does not differ materially from any other print. They originate in Odessa, whence they come by steamer to Chinese ports or to Vladivostok, from which points the majority are brought overland into Manchuria. Many of the designs on Russian Prints are similar to those on American prints. Measuring 24/25 or 26 inches wide, 88 by 68 or 88 by 64 ends and picks, and 30 yards per piece, they are generally packed 30, 40, and sometimes 60 pieces to a bale. On the whole, Russian Prints are not a high-grade material.

Samples and their Classification.—Unless some definite system, which provides means for ready reference to any of the individual samples forming part of the collection, is adopted from the very start, sample collections are of comparatively small value. The successive pasting into a book of samples which represent fabrics of different materials, different weaves, and different finishes—and under the heading “finishes” would be included dyeing, printing, embossing, etc.—is of no great value, for it becomes impossible after a time to readily turn up any given sample. Even with an index to the collection so formed it is only possible to turn up a sample of material the name of which is known. A person wishing to turn up in such a collection a sample of a certain type of fabric the name of which he did not know at the time could not do so, and the more specimens or samples were added to the collection the more difficult it would

become to turn up a given sample, and the value of the collection would lessen instead of increase.

If fabrics are divided into 17 headings representing the main divisions into which they may be classed, and each division or section is subdivided into numbered sub-sections, the task becomes simpler, and there results therefrom a series of key numbered collections each containing samples of fabrics of a similar type but of varying quality and value. Each collection (or sub-section) becomes known by a combination of two numbers, one of which is the main division or section number and the other the number of that particular sub-section. These numbers precede the name of the division and the name of the subdivision.

The 17 main divisions or groups, together with their respective subdivisions, which will in practice be found to be ample are as follow :—

SECTION NUMBER.	SUB-SECTION NUMBER.
1. Grey Cottons.....	<ol style="list-style-type: none"> 1. Shirtings and Sheetings. 2. Drills and Jeans. 3. Shirtings and Sheetings, Native. 4. Drills and Jeans, Native. 5. Not specially enumerated.
2. White Cottons.	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Brocades. 4. Brocades (with finish). 5. Striped or Spotted Shirting. 6. Striped or Spotted Shirting (with finish). 7. Crumps and Crapes. 8. Crumps and Crapes (with finish). 9. Lenos. 10. Not specially enumerated.
3. Printed Cottons... ..	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Furnitures. 4. Crapes. 5. Crumps. 6. Muslins, Lawes, and Cambrics. 7. Lenos and Balzarnes. 8. Duplex or Reversibles. 9. Blue and White T-Cloth. 10. Not specially enumerated.

SECTION NUMBER.	SUB-SECTION NUMBER.
4. Dyed Plain Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Crimps. 4. Crimps (with finish). 5. Drills, Twills, and Jeans. 6. Lawns, Muslins, and Cambrics. 7. Hongkong dyed. 8. Lenos and Balzagnes. 9. Native. 10. Native (with finish). 11. Not specially enumerated.
5. Dyed Figured Cottons	<ol style="list-style-type: none"> 1. Figured. 2. Figured (with finish). 3. Native. 4. Native (with finish). 5. Not specially enumerated.
6. Raised Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Dyed. 3. Printed. 4. Duplex Printed. 5. Dyed and Printed. 6. Dyed and Duplex Printed. 7. Yarn-dyed. 8. Figured White. 9. Not specially enumerated.
7. Coloured Woven (<i>i.e.</i> , yarn-dyed) Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Figured. 4. Figured (with finish). 5. Crimps. 6. Crimps (with finish). 7. Plain Native. 8. Plain Native (with finish). 9. Figured Native. 10. Figured Native (with finish). 11. Not specially enumerated.
8. Dyed and Printed Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Crimps. 4. Crimps (with finish). 5. Figured. 6. Figured (with finish). 7. Native. 8. Not specially enumerated.

SECTION NUMBER.	SUB SECTION NUMBER.
9. Velvets and Velveteens (Cotton).....	<ol style="list-style-type: none"> 1. Plain. 2. Printed or Embossed. 3. Embroidered. 4. Dyed Cords and Corduroys. 5. Un dyed Moleskins. 6. Not specially enumerated.
10. Plushes and Velvets.....	<ol style="list-style-type: none"> 1. Plain Pure Silk. 2. Figured or Embossed. 3. Silk Seal (with cotton back). 4. Silk with cotton back. 5. Silk mixed with other fibrous materials (with cotton back). 6. All-cotton Plush (including with finish). 7. Not specially enumerated.
11. Silk Piece Goods.....	<ol style="list-style-type: none"> 1. Plain. 2. Figured. 3. Plain Native. 4. Figured Native. 5. Ribbons (all silk and mixtures). 6. Not specially enumerated.
12. Silk and Cotton Fabrics....	<ol style="list-style-type: none"> 1. Plain. 2. Figured.
13. Woollen and Cotton Mixtures.....	<ol style="list-style-type: none"> 1. Plain. 2. Figured. 3. Poncho Cloth. 4. Spanish Stripes. 5. Union Cloth. 6. Plain Lustres. 7. Figured Lustres. 8. Not specially enumerated.
14. Woollen Fabrics....	<ol style="list-style-type: none"> 1. Habit, Medium, Russian, and Broad Cloth. 2. Bunting. 3. Cambrics, Dutch. 4. Cambrics, English. 5. Flannel. 6. Lastings (all kinds) 7. Spanish Stripes. 8. Long Ells. 9. Not specially enumerated.

SECTION NUMBER.

SUB-SECTION NUMBER.

15. Linen and Linen Unions ... { 1. Plain.
2. Figured.
16. Hemp and Hemp Mixtures { 1. Plain and Figured.
2. Yarn-dyed.
17. Miscellaneous.

Whether the loose-leaf system with folders to contain the samples is used or whether they are entered into special books is a matter for the individual, but the loose leaf or card-index system with folder is infinitely preferable, admitting of the removal of any given sample for reference or comparison. The index to such a collection of samples would be alphabetical (even though not absolutely so), and if a sample of Italian (of the plain variety) were added to the collection, it would be added under section 4, Dyed Plain Cottons. If the sample of Italian thus added to the collection was the fifth sample of Dyed Plain Cottons (with finish), it would appear in the index to the sample collection under 4 and would be entered as follows,--

NAME OF FABRIC.	SECTION NUMBER.	SUB-SECTION NUMBER.	SAMPLE NUMBER
Italian	4	2	5

A sample of Bunting, on the other hand, would be filed under section 14, sub-section 2; and if it were the thirty-first sample filed under that sub-section, it would be indexed under the letter B as Bunting, 14: 2: 31.

This decimal system of numbering and classifying samples lends itself to a refinement of subdivision unattainable in any other.

Generally speaking, samples, unless accompanied by certain descriptive information, are of little value, and care should be taken to describe briefly any salient feature connected with the fabric. This information may concern either the trade-mark, the importer, the value, or the date when the sample was entered into the collection, and brief particulars of the shipment of which it is a sample. This kind of information is of material value where the sample concerns a class, style, or quality of fabric not hitherto met with. With a comparatively small amount of trouble it would be possible to get together very valuable collections of samples. And if the individual would but give a little time and thought to the question of textile samples, and but a tithe of the time devoted to any hobby he may have, he will be amply repaid by the added knowledge he will acquire. All samples should be of uniform size (7 inches by 4 inches will be found a very useful size) and should invariably be in duplicate—one

to use in obtaining all particulars necessary for classification and the other for the actual sample collection. Weave structure, nature of yarns, etc., may be studied and tests for components made and recorded.

Nothing will give a better idea of relative values of fabrics than knowledge of components, style of weave, etc. This, of course, does not apply to extrinsic values, *i. e.*, values due to fashion, exclusive designs, or proprietary articles. There is nothing to go by in such cases better than market values, but in the plainer staples knowledge of construction, finish, etc., means ability to classify fabrics and estimate their approximate relative values.

Provisions for an index to sample collection have been made at the end of this book, enabling the ready adoption of the system now advocated.

Sateens.—This material is a light weight cotton fabric finished to imitate Silk Satin. In weaving Cotton Sateens the same style of weave is adopted as in weaving Silk Satin, the object aimed at being an even, close, smooth surface and one capable of reflecting light to the best advantage. In a warp sateen weave the warp only appears on the surface, the filling or weft threads being effectually and completely hidden by the warp threads. In passing over the filling the warps do not interweave at regular, but at irregular, intervals; thus they may pass over five, eight, ten, twelve, or sixteen, then under one and over eight more, and so on. Sateens average 36 inches wide and from 30 to 60 yards in length per piece.

Sateens are woven on the same principle as Italian. The common Sateen cloth is produced on a "five threads and picks" system. Sateens are woven either as "Warp Sateen" or "Weft Sateen"; the peculiarities of these weaves are given under those headings.

Satin.—A term applied to silk goods woven on the same principle as Sateens, either Warp Sateens or Weft Sateens. In weaving most silk fabrics the warp and weft, or filling, are made to intersect each other every alternate time (as in plain weaving) or every third or fourth time in regular order (as in ordinary or plain twill weaving). In weaving Satin the same style of weave is adopted as in weaving Cotton Sateens, the object aimed at being an even, close, smooth surface and one capable of reflecting light to the best advantage. In a warp weave Satin the warp only appears on the surface, the filling or weft threads being effectually and completely hidden. In passing over the filling the warps do not interweave at regular intervals; thus they may pass over five,

eight, ten, twelve, or sixteen, then under one and over eight more, and so on. Common Satin is what is technically known as an eight-leaf twill, the order in which the filling thread rises being once in eight times. The filling in the better qualities of Satin is of silk, whilst in the lower grades of this fabric cotton is generally used for the filling. Rich Satins may be woven on almost any number from five to twenty leaf twills. Satin at the time of leaving the loom has a somewhat lousy and rough surface—this is removed by passing the fabric over heated metal cylinders, which destroy the minute fibrous ends and increase the brilliancy of the silk. Black Satins are often woven with a selvage which is of a different colour to the piece.

Satin Drill.—When a Drill is woven with a warp-faced sateen weave it is known as a Satin Drill, to distinguish it from a Drill woven with a twill weave, which is known as a Florentine Drill.

Satin Weave.—In weaving a satin design the filling thread is made to pass under one and over eight, ten, twelve, or a greater or lesser number of warp threads, and the order in which this is done is irregular. The filling by this process is thus placed practically all on the face of the cloth, and this style of weave is sometimes called a filling-face satin weave. By reversing the process and bringing practically all the warp to the surface or face of the cloth a warp-face satin is produced. Cloth produced by this system of weave has a close, smooth surface reflecting light to a high degree and giving it the appearance of Satin Cloth, a fabric which is best described as a cloth made of silk woven with a satin weave.

Satinet or Satinette.—An imitation of the true or Silk Satin woven from mercerised cotton or other yarns. It is similar to Sateen, but somewhat lighter in weight. The term is used to describe the four-shaft satin weave, which does not fulfil the conditions of the real Satin as regards the order of intersection of warp and weft.

Schreiner Finish.—This, like all other special finishes, is the result of a process through which a fabric is passed with the view of rendering its face more lustrous, i.e., capable of better reflecting light and hence having a more silky appearance. A Schreiner finish is given to a woven cloth by means of a specially engraved steel roller. This roller is engraved with minute lines running parallel to each other. When this roller has been suitably heated and set with the right amount of pressure the

cloth is run between it and a plain backing roller. The engraved roller, which comes in contact with the cloth impresses on it minute lines, which can readily be distinguished by means of a counting-glass.

In America a Schreiner finish is often known as a "milled" finish.

Scribbled.—When any two or more kinds of fibres have been thoroughly mixed together prior to being spun into a thread they are said to be "scribbled."

Seamless.—Applied to hosiery knitted in one piece on a circular machine, leaving an opening at the toe to be looped together. The shaping of the leg, heel, and toe is done by steaming and then drying on boards of proper form.

Seamless Bags.—All-cotton bags woven on looms which automatically measure the length of what is practically a tubular cloth required for each bag. What are virtually two cloths are "condensed" and woven together to form the bag bottom. In forming the body of the bag the loom weaves two fabrics, one over the other, and in weaving the bottom these are combined into one.

Selvedge.—The edge of any piece of woven fabric. The term is synonymous with "list." The warp threads which go towards the weaving of selvages are in some cases made of a stronger material than that used for the bulk of the fabric. Folded yarns are often used for this purpose, because during the process of weaving single selvedge yarns are liable to break out oftener than any other, generally on account of the pulling action of the weft thread in the shuttle as it is "picked" across. This is more particularly the case with cottons. Selvages are that part of the fabric by which it is held out in a stretched position in many of the stages of finishing. In the textile trade generally it is often stated that "a good selvedge shows a good cloth." Velvets and Velveteens that are mounted on iron frames, to which they are attached by means of series of hooks penetrating the selvages, have these selvages reinforced by stronger warp threads.

Selvages, or lists, of a colour different from a material similar to that of the bulk of the fabric denote that the fabric has been woven of dyed yarns and that it has not been piece-dyed. Obviously, if piece-dyed, the selvedge would be of the same colour as the bulk of the fabric. Distinctive styles of selvages have given rise to special names of fabrics, such as Spanish Stripes. The actual quality of a fabric cannot be always told by the selvedge,

but other conditions being equal, it then becomes a good guide to quality. A silk selvage thread or threads, or the initials of the manufacturer in silk, appearing on the selvage of an all-wool fabric generally denotes a superior quality of fabric. The following, from a work dealing with cotton fabrics, shows the generally accepted value of selvages as an indication of quality: "Advertising has educated the retail dealers and consumers to the fact that cotton warp goods with a white selvage, the ground being of colour, are more to be depended upon not to crock than similar cloths of solid colour."

Serge (Cotton).—An all-cotton fabric woven with a decided twill and having a special finish imitating wool, usually printed with hair line stripes to imitate woven effects.

Shadow Cretonne. A fabric of comparatively recent creation having as a distinctive feature the design printed on the warp threads. The filling is generally white, but is sometimes dyed to a shade approximating the general tone of the large floral decorations which are generally used in this class of fabric. The warp threads take the colouring matter in such a way that when woven the design or pattern appears equally on both sides of the fabric in somewhat blurred and softened tones. From the fact that the fabric is reversible, *ie.*, shows a design on both sides, it has sometimes been called a Reversible Cretonne, but the true Reversible Cretonne is the result of printing on a woven fabric and not on the warp threads only prior to weaving. The blurred effect, resembling that of a fabric which might have run in the washing, is at times intensified by the introduction here and there of yard-dyed warp threads of solid colour. They are not always an all-cotton fabric; flax enters sometimes into their composition.

Shantung.—The real Shantung is a Chinese silk fabric of the Pongee class. This fabric has now been imitated in cotton yarns suitably finished. The yarns used in making Shantung are spun with thick soft places at irregular intervals in the yarn; this irregularity is more noticeable in the filling yarns.

Sheeting.—A light or medium weight plain woven all-cotton fabric woven from coarse or medium yarns. The name applies to both bleached and unbleached cloth. Under the heading "Grey Sheeting" will be found a description of the two distinct varieties of fabric known as Sheeting. In the trade it would appear that, should a "Sheeting" be dyed or printed, it is never sold as a Sheeting, but under some other name.

Shirtings.—A generic term applied to any material originally and usually employed for the making of shirts and vests, such varieties as Grey, Harvard, Oxford, Zebra, Seersucker, etc. The term Shirting is also used to designate all styles of goods to be used with reference to the Grey Shirts which are exported from England and America. This Grey Shirts is a plain woven cloth of low quality and heavily sized yarn, which has not been bleached.

Short Stick. This term implies a yard of precisely 36 inches, in opposition to the term *Long stick*, which is by trade custom a yard of 36 inches in length.

Shot.—A weaving term having the same value as "pick." When a fabric is described as having a *shot* or *shot* to the inch it means that there are so many threads to the inch. When used to describe a colour effect in fabrics, it applies to fabrics which are woven with different colours in warp and weft, and which according to the way they are held when wound, appear to change in colour.

Sicilienne. A Mohair of heavy weight.

Silence Cloth.—A heavy all cotton back fabric used to cover the table under the linen cloth to protect and help to prevent damage to the finish of the table. Made in widths from 54 to 64 inches. The fabric is a shade darker in colour, and made from coarse yarns; it is also known as *Table bottom*.

Silesia.—A cotton fabric woven with cross or chain weave, usually printed in simple and highly imitative. The high finish found in this class of fabric is generally held to be imparted to the fabric after weaving by subjecting it to a compression of elastic blows from a series of hammers. In the fabric is wound upon a cast non-ferrous. Generally woven in a three half twill from single 3's to 4's in warp and filler, and to produce a 45-degree right hand twill. So called entirely a cotton fabric used for linings. A variety of yarns and types of Silesia is also on the market.

Silk Beaver. Silk Beaver is a poplin fabric woven so as to imitate the prepared fur of the beaver. Like many other fabrics of this style the pile is all silk and the ground or cloth back is all cotton. This fabric appears to be used very largely as a rich brown, and this differentiates it from similar fabrics as Silk Seal, which are dyed black. The quality of Silk Beaver depends

upon the depth and closeness of pile. If looked at from behind, the pile threads will distinctly show as small shiny spots where they are bound into the back. The closer these little silk dots are to each other the heavier the pile and the better the quality. The value prior to 1914 ranged from 5s. to 12s. per yard but has since increased. The pile may have a length of as much as half an inch in the best grades. Generally framed in lengths of from 30 to 33 yards. As this is bulky material when framed, the landed cost in the East is greatly increased.* Average width, 48 to 50 inches.

Silk Gingham.—This class of fabric is similar to Gingham, Madras, Madras Gingham, Zephyr, etc., except that the fabric contains more or less silk in the filling. It sometimes happens that through inadvertence such material is found described simply as a Gingham, hence the presence of silk should be looked for in goods so described.

Silk Mull.—Like Mull, this fabric is a plain-woven, soft-finished material, but is made from cotton warp and silk filling and is generally finished undyed. Silk Mull is finer in texture than Cotton Mull. The silk filling used in this fabric is raw silk, viz., tram silk.

Silk Pongee.—A light-weight fabric made of the silk produced by wild silkworms that feed on oak leaves.

Pongee is a soft, unbleached, washable silk, shipped from China to Europe in large quantities, where it is bleached, dyed and ornamented in various styles of designs. The name is also applied to a variety of dress goods made in Europe woven with a wild-silk warp and a fine worsted weft. This material is of comparatively recent make and is made mostly with narrow stripes, produced by the insertion of certain yarn-dyed threads.

Silk Seal (Cotton Back).—This is an imitation fur fabric made in a range of quality, length, and closeness of pile. In this fabric the pile only is of silk, the foundation cloth being all cotton.

Silk Seal might be mistaken for Silk Beaver if not judged from the point of view of colour. Silk Seal is black, Silk Beaver is brown. There is a variety of this fabric known as a Fancy Silk Seal, similar in construction and components but having stamped in outline by means of rollers a design resembling the irregular scales on a crocodile's skin. Along the lines demarcating these

scales the pile has been crushed and fixed down by heat. This fabric is not a true Silk Seal. Quality in this, as in other pile fabrics, depends on the closeness and depth of the pile. There is a possibility of mistaking Silk Seal with cotton back for a Silk Plush with cotton back, but generally the pile of Plush is shorter than that of Silk Seal. Average width, 48 to 50 inches.

Silk Yarns.—There are two distinct classes of silk yarns, *i.e.*, (a.) pure, or net, silk and (b.) spun silk.

(a.) *Net Silk Yarns.*—These are constructed from fibres reeled straight from the cocoon, and in the case of organzine (or warp) yarns three to eight fibres are lightly twisted together; subsequently, two or more of these compound threads ("singles" as they are termed) are folded together to form the silk yarn employed as warp. Weft yarns, known as tram silk, are made from two or more stands, each made from three to twelve cocoon fibres, which have not undergone any preliminary twisting, so that tram silk is much straighter, softer, and more lustrous than organzine.

(b.) *Waste and Spun Silk Yarns.*—The fibre is obtained from "pierced" cocoons, *i.e.*, cocoons through which the silk moth has forced a way at the time of emerging from same, also from "wild" cocoons. The low qualities are short fibred and are only suitable for weft yarns, while the longer drafts produce higher quality yarns well suited for warp.

Counts of spun silk are based upon two distinct systems of numbering. In the French system the number is based on the singles, by metres per kilogramme; two and three cord yarns have one-half, one-third, etc., the length the numbers indicate thus:—

No. 100 singles	has	100,000	metres per kilogramme.
" 2/100	"	50,000	" "
" 3/100	"	33,333	" "

The other and more general system is the English. The hank is 840 yards and the number of the hanks in 1 pound avoirdupois is the count of the yarn. It is based on the finished yarn, and singles and two and three cord yarns of the same number have all the same number of yards per pound. Thus:—

No. 50 singles	has	42,000	yards per pound
" 50/2	"	42,000	" "
" 50/3	"	42,000	" "

Sliver.—A continuous strand of cotton or other fibre in a loose, untwisted condition, ready for the further process of slubbing or plying, preparatory to being spun.

Spanish Stripes, Cotton.—A plain-woven all-cotton fabric, sometimes woven from dyed yarns, but oftenest met with as a piece-dyed material woven with a simple one-over and one-under weave. The selvedge is often woven with black warp threads to the width of about 1 inch. The filling weft threads are soft and full, the warp threads are much finer and hard-twisted. The surface is raised and the general appearance of the fabric is similar to Flannelette. Often met with in bright vermilion. Average width, 56 inches; length, 25 yards per piece; and value (nominal), 7d. per yard.

Spanish Stripes, Woollen.—Essentially an all-wool fabric, free from any ornamentation of weave, printing, or embossing, this class of fabric is woven with a plain one-over and one-under weave. Soft of handle, Spanish Stripes are generally dyed bright red and have as a distinguishing feature a selvedge of coarser warp threads from 1½ to 2 inches in width, some of which are dyed, prior to weaving, a different colour (generally black) to the rest of the warp threads or weft filling threads. These coloured warp threads go towards making generally three separate coloured stripes in the selvedge and have given rise to the name of this particular fabric. In width measuring up to 62 inches and with a length of 29 to 30 yards per piece, Woollen Spanish Stripes are met with in a limited range of quality and the average price of same taken over the period 1904 to 1914 was 1s. 8½d. per yard.

Spanish Stripes, Wool and Cotton.—This class of fabric, being a mixture and not a union fabric, answers to the description of a Woollen Spanish Stripe but differs from it in that it is woven from yarns which are composed of a mixture of wool and cotton. The "handle" is very nearly that of an all-wool fabric, the average width some 62 inches, and the length per piece 29 to 30 yards. The distinctive selvedge of this class of fabric is maintained in the wool and cotton variety.

Split Foot.—Refers to black or coloured hosiery having a white or unbleached sole.

Sponge Cloth.—A fine cotton or wool fabric having a surface resembling that of a small sponge.

Spun Silk.—Applied to a low grade of silk used in the cheaper lines of silk hosiery. It is made from floss, injured cocoons, bunks, and waste from reeling, and bears the same relation to silk as cotton waste to cotton or shoddy to wool.

Staples.—Staples is a term used to designate those fabrics which are woven in the same way year after year, varying only in the colouring given to them, which may change in accordance with the demands of fashion and of the buyer.

The principal dress goods staples are Brillantines, Sicilians, Mohairs, Imperial Serges, Storm Serges, Cheviots, Panamas, Battistes, Taffetas, Voile, Muslins, Nun's Veilings, Cashmere, and Shepherd's Check.

Surah.—A light, soft, twilled silk.

Swansdown.—Like Cotton Flannel and Flannelette, Swansdown is a fabric made of cotton with a "raised" or "napped" surface. Being raised but on the back of the cloth, it is "single raised"; heavy and closely woven Swansdown is a typical raised cotton cloth. The weave is on the satin-weave principle.

Swiss Embroidery.—This process of ornamentation closely resembles lappet spots, but, unlike lappet spots, they are in reality the result of a subsequent process of weaving. The essential difference in the manner of attaching the thread which is used for the figuring to the cloth can readily be seen. In Swiss Embroidery there is an equal amount of floating thread used to form the spot on the face of the cloth and on the back, thus producing what may be termed a solid spot on both sides and therefore reversible.

Swivel Figures.—High-class fabrics are often ornamented with swivel spots and figures, which are easily distinguished from the lappet or extra warp figures. In this style the figure is interwoven with extra weft by small shuttles into the ground cloth structure. Each figure is produced by an independent weft thread quite distinct from the weft pick forming the ground structure or body of the fabric. The figure threads are well bound into the cloth, the bulk of the material being on the surface. Where no figure is required in the space between, the shuttles remain idle in the loom, and the single thread from each shuttle joining the swivel figures is often cut away. Often used where a silk figure or a mercerised cotton figure is required on a cotton or worsted ground.

Tapestry.—A yarn-dyed figured fabric composed of two sets of warp and weft threads, woven on a Jacquard loom.

T-Cloth.—An all-cotton plain-woven fabric, usually woven from low-quality yarns, generally sold in the grey or unbleached

state. Most of the *T-Cloth* imported into China is a heavily sized cheap grey cloth, usually 30 to 32 inches wide, 24 yards per piece, with a woven coloured heading somewhat similar to the heading in Grey Shirtings. Some *T-Cloth* is imported measuring 36 inches wide by 24 or 40 yards per piece. These Grey *T-Cloths* are generally packed 50 to 75 pieces per bale. Bleached *T-Cloths*, 31 and 36 inches wide, are also imported in small quantities. These are generally packed in cases of 50 pieces. The fabric derives its name from the mark **T** under which it was first exported. *T-Cloth* is also known as "Mexican."

Teasels, or Teazels.—Thistleheads with curved bracts, used in cloth raising.

Terry Cloth.—A weave in looped effect. A Velvet in which the loops have not been cut. Frequently applied to cotton fabrics of the order of Agaric and Sponge Cloth. See Turkish Towelling.

Tests by Burning.—Yarns or fibres of different origin burn in different manner. Cotton, linen, ramie, reed, china grass, etc., ignite and burn readily with a bright smokeless and odourless flame, leaving but a small amount of ash, this being the characteristic of vegetable fibres. Animal fibres, on the other hand, are slower to ignite, the appearance of the flame is lifeless, and the fibres burn more slowly than vegetable fibres. Wool, when burnt, emits a disagreeable odour, and the residue or ash takes the form of a bowl or knob. Silk burns in the same way as wool when it is free of "weighting." When artificially weighted, silk may have its weight increased to almost any desired extent—from 80 to 200 per cent. increase in weight can be obtained without creating suspicion. When such weighted silk is burnt, instead of forming itself into small black beads or knobs, it burns leaving a distinct ash, which retains somewhat the shape of the original material. Artificial or cellulose silk burns readily and in burning does not give off any odour.

Test for Artificial Silk.—The burning test should in most cases be sufficient to distinguish artificial from true silk, but if a chemical test is necessary, by immersing the suspect sample in a caustic potash solution it will be seen that artificial silk turns yellow, whereas true silk does not change colour. Artificial silk, which is a nitro-cellulose, burns very rapidly, leaving practically no ash whatever. A simple way of recognising artificial silk is by testing the threads under moisture. Unravel a few threads of

the suspected fabric and place them in the mouth and masticate them thoroughly: Artificial silk readily softens under this operation and breaks up into minute particles, and when pulled between the fingers shows no thread, but merely a mass of cellulose or pulp. Natural silk, no matter how thoroughly masticated, will retain its fibrous strength.

Tests for Linen.—Linen, like cotton, burns when a light is applied, leaving a white ash. Linen yarns are more irregular in their thickness longitudinally than cotton thread taken from similar woven fabrics. This difference makes the detection of linen in a woven cloth comparatively easy. The fibres are straighter, longer, and stronger when separated in the thread than cotton. The threads often snap sharp and clear when breaking them in the fingers. The oil test for linen is based upon the property which linen has of more readily absorbing oil than cotton does. When a linen and cotton mixture fabric which has been freed from dressing by washing and boiling is dipped in oil and then held up to the light it will be seen that the linen fibres look transparent, whereas the cotton remains more nearly opaque. This is due to the linen having absorbed the oil more readily than the cotton. All the cotton contained in a linen and cotton fabric can be readily dissolved by dipping the fabric in a concentrated sulphuric acid bath for one or two minutes. The sample is first freed of dressing. After washing and drying a sample so tested the linen fibre only will remain.

Test for Mercerised Cotton. Prepare a solution made by dissolving $1\frac{1}{2}$ ounces of iodide of potassium in 5 ounces of water, then add to this solution $\frac{1}{2}$ ounce of iodine, and mix with another solution made by dissolving $7\frac{1}{2}$ ounces of zinc chloride in 3 ounces of water. The test is applied as follows: take the suspect sample and free it from any dressing or sizing by soaking it in water; then, after freeing the sample from any superfluous water, place it in some of the prepared solution for three minutes, and then rinse the sample in water. Should the cotton tested have been mercerised it will appear of a deep blue colour. On washing with water the blue colour fades very slowly and peels long washing, whereas ordinary cotton rapidly becomes white on washing. Even dyed piece goods will show the deep blue reaction, which is the result of the testing solution acting upon the caustic soda used in the process of mercerisation. When making this test it is best to treat a "known" mercerised cotton at the same time as the suspect sample so as to have a basis for comparison.

Tests for Silk.—If a silk and wool mixture or union fabric is boiled in strong hydrochloric acid for 15 minutes, it will be found that the wool merely swells, whilst the silk acted upon by the acid completely dissolves. By careful weighing before and after the test it becomes a matter of simple calculation to arrive at the percentage of silk present in the fabric.

Test for Wool.—If a fabric suspected of containing wool and cotton or other vegetable fibre is boiled for 15 minutes in a solution made by dissolving either 1 ounce of caustic soda or caustic potash in a pint of water it will be found that all the wool will be destroyed and only the vegetable fibres remain. This test, which is based upon the well-known fact that caustic soda dissolves wool, may be used to ascertain the percentage of wool in a cloth if the sample tested is thoroughly washed, dried, and weighed before the test is applied. After testing and drying, the loss in weight represents the amount of wool which was present, and destroyed during the test. This test may be reversed and the cotton destroyed by treating the sample with an 80 per cent. sulphuric acid solution. This, however, is a longer test, necessitating the sample being kept in the sulphuric acid solution for about 10 or 12 hours. Prior to drying and weighing the sample should be well washed in alcohol.

Textile Fibres.—The principal fibres which enter into the construction of textiles can be divided into the following six classes:—

Vegetable.—Cotton, flax, ramie, reed, china grass, jute, hemp, kapok, and marine fibre.

Modification of Vegetable.—Mercerised cotton, artificial silk, animalised cotton, artificial wool, paper yarn.

Animal.—Sheep's wool, mohair, cashmere, camel hair, alpaca, vicuña, llama, guanaco, rabbit hair, horsehair, cow and calf hair.

Animal Secretions.—Silk and wild silk.

Mineral.—Asbestos.

Metallic.—Gold, silver, and other wires, metal-coated fibres.

Thickset.—One of the many varieties of Fustian, which comprise Corduroys, Velveteens, Moleskins, Thickset, etc.

Thread.—In general, a twisted strand of cotton, flax, wool, silk, etc., spun out to considerable length is called thread. In a specific sense, thread is a compound cord consisting of two or more

yarns firmly united together by twisting. Thread made of silk is technically known as sewing thread; that made of flax is known as linen thread; while cotton thread intended for sewing is commonly called spool cotton. These distinctions are generally observed by the trade.

Three-quarter Hose.—A variety of ribbed top stockings made for children and reaching nearly to the knees.

Ticks, or Ticking.—Ticking is a single cloth of either medium or heavy weight woven from cotton yarns of from 14's to 22's in warp and filling or from yarns which would give the same weight material, such as 18's warp and 22's filling. Usually woven with two-over-one or three-over-one twill weave. Ticking belongs to the class of stiff, hard-faced cotton fabrics. This feature is due to the warp-faced twill weave. These goods are made usually in two coloured warp patterns, dark blue and white and red and white. One feature which is worthy of mention in regard to Ticking and other similar lines is that they are to-day being stock-dyed in increasing quantities. This method consists of dyeing the cotton or bleaching it, as the case may be, in the raw state and then carding, drawing, and spinning just as if a grey fabric were to be made. Stock-dyeing results in the dye affecting the fibres which form the very centre of a yarn, and for this reason is a better process than dyeing the finished yarn. Brushed, sheared, sized, and calendered Ticking is either packed lapped or rolled into bolts.

Tire Cloth.—A fabric made from strong slackly folded yarns of good-quality cotton used in the lining of tires. The warp threads are very closely set, so as best to withstand strain. The weft threads are very openly set, so as to prevent undue pressure on the warp threads, which should be straight and so avoid friction or cutting which might arise from the action of the inflated inner tube and the tire whilst in use. The yarn used in this type of cloth is usually made from 3's to 44's count, doubled 11 or 12 fold, necessitating great care in the subsequent twisting to ensure evenness of strength and elasticity, which in this class of cloth is essential. Tire fabrics, as used in the manufacture of automobile and bicycle tires, are made from long-staple Sea Island cotton, the yarn being combed and of a comparatively coarse number, usually 8's to 40's, and from single yarn to 12-ply. A wide range of weights is found in these fabrics, varying from 3 to 20 ounces per square yard. This fabric forms the base of the finished rubber tire.

Tram.—A thrown silk thread taking its name from the French *trame*, meaning weft, softer and more flossy and having less twist than organzine. It is generally used for weft, which, as it bears little strain in weaving, need not be as strong as the warp, but should be soft and bulky, so that when beaten in successive threads will lie close together and fill up the interstices of the web.

Tram and organzine are, with the exception of spun waste silk, the only kinds of silk thread used for weaving—varying, however, in quality of silk, amount of twist, and in size.

Trunk Length.—Applied to women's hosiery midway between ordinary and opera length, usually widened gradually above the knee.

Tubular Cloth.—The most commonly met with examples of Tubular Cloths are the ordinary pillow slip, tubular lampwick, tapes, etc., which are in common use.

Tulle.—A plain, fine silk net. Practically the same as Maline.

Turkish Towelling.—Essentially Terry Cloth woven as an all-cotton fabric having as a salient feature an uncut loop-pile surface. Sold by the linear yard for the making of bath robes, etc. Woven unbleached or with some coloured yarns for bordering effect and subsequently bleached, the coloured yarns used resisting bleaching. Otherwise woven in sizes suitable for cutting into lengths, which are then sold as Turkish Towels.

Tussore, or Tussah.—The wild silk from which Shantung and Pongee are made. Applied to these fabrics when heavily and coarsely woven.

Tweed.—Rough, unfinished fabric of soft, open, and flexible texture, woven on a plain weave from wool or cotton and wool, usually of yarn of two or more shades. Originally the product of the weavers on the banks of the River Tweed. The face of the cloth presents an unfinished appearance rather than a sharp and clearly defined pattern.

Twill Weave.—A twill weave is a weave that produces diagonal lines across the cloth. In this class of weave the filling threads pass over one and under two, or over one and under three, four, five, or six, or over two or three and under one, two, three, or four, or over four and under four, three, six, etc. Where there are the same number of warp and filling threads to the inch, twill lines will form an angle of 45 degrees, if the warp threads are closer together than the filling threads, the twilled lines produced will approach more the horizontal. Twill weaving permits the introduction of more material into the cloth than a plain weave and produces, therefore, a closer and heavier fabric. A twill effect in a material is also called a diagonal, from the direction it has in relation to the length of the cloth. This diagonal effect is continually produced by the warp and weft intersections traversing one thread and one pick further from their respective positions each time a pick of weft is inserted. Twill weaves may be divided into four common classes—(1) regular, (2) broken, (3) fancy, (4) figured.

Regular Twills.—A regular twill is referred to as a twill of so many "ends" or "shafts"; by this is meant a twill which contains a number of warp and weft threads which, added together, equal the number of "ends." Thus a five-end twill can either have (a) four warps and one weft, (b) three warps and two wefts, or (c) two warps and three wefts—this form of twill will be seen to be a reverse weave to (b).

Broken Twills.—A twill effect produces a twill line which, when the number of warp and weft threads are equal, is at an angle of 45 degrees. In a broken twill effect this line, which may be compared to the left hand stroke of a letter V, is combined with another twill line running in an opposite direction and which is simply a turning or "reversing" of the threads in the regular twill weave. Broken twill effect enters largely into the weave design of Harvard Shirting.

Fancy Twills.—As the term indicates, fancy twills is a style of weave which, whilst always retaining the main features and essentials of a "regular" twill, has been made fancy by alternating the arrangements of the thread and thus producing "elongated twills," "corkscrew twills," or "combination twills." The description of fancy twills could only be attempted by the use of illustrations and pages of explanations.

Figured Twills.—Figured twills are regular twills with a small figure introduced between the diagonal lines. The designs introduced are generally small figures produced by plain weave or a small diamond-shaped spot made by either the warp or the weft threads being brought to the surface and made to form the design. The designs are never very elaborate.

Twin Needle.—A double row of interlocked machine stitching used for covering raw edges and seams of knit underwear.

Unclassed Native Cotton Cloth (China).—All Native Cotton Cloths, whether woven on a hand or power loom, which are not—

- (a.) Nankeen as defined in Customs Notification No. 876 (*see* Nankeen);
- (b.) Specially enumerated in the General Tariff of 1858 for the Trade of China; or
- (c.) the produce of a Privileged Factory and at the same time enumerated in either the General Tariff of 1858 or the Revised Import Tariff—

are grouped under the heading “Unclassed Native Cotton Cloth.” This group comprises:—

All cotton fabrics woven with a plain, satin, or twill weave or a combination of these weaves, in part or whole, from yarns, whether single or folded, which have been either mercerised, gassed, dyed and mercerised, or dyed and gassed prior to weaving, whether woven in a cloth having a solid colour effect or whether woven so as to produce a striped or woven figured effect.

All fabrics woven with a plain, satin, or twill weave or a combination of these weaves from grey, white, or dyed yarns which subsequent to weaving have been mercerised or dyed in the piece.

Generally all cotton fabrics woven so as to imitate foreign yarn-dyed fabrics, whether same are devoid of a raised finish or have been raised on either back or face of the cloth, irrespective of whether the yarn has or has not been mercerised prior to weaving and irrespective of whether the cloth has or has not been mercerised after leaving the loom.

The term “Native Cotton Cloth” (China) is applied to hand-loom fabrics other than Nankeen, unclassified native cotton cloths or fabrics that are specifically enumerated in the General Tariff of 1858 for the Trade of China. The name is given to a group of cloths which answer to the following description:—

All hand-loom plain-weave fabrics which do not exceed 20 inches in width woven from ordinary grey or white single cotton yarn, which have been piece-dyed after leaving the loom, but which have not been either mercerised or gassed.

All hand-loom plain-weave fabrics which do not exceed 20 inches in width woven from ordinary grey or white single cotton yarn which have been either resist, discharge, or direct printed but which have not been either mercerised or gassed after leaving the loom.

Union Broadcloth.—This fabric, also known under the name of Poncho Cloth, is a plain woven cotton warp and woollen weft fabric, woven in the unusual width of 74 inches and averaging in length of piece from 36 to 38 yards. The selvedge of this class of fabric is distinctive, showing a long unshorn hairy surface. The face of the cloth does not show the weave or yarn intersection points, as it has a typical Broadcloth finish, but these are distinctly to be seen on the back of the fabric. A Union Broadcloth of the above description, typical of that generally exported to China, averaged in value during the years 1904 to 1911 about 1s. 6d. per yard.

Union Cloth.—As the name implies, Union Cloths are woven with warp and weft of different fibres. They are also called "mixed cloths," and the union of the two different kinds of fibres may be arrived at by intermingling the wool and cotton fibres to form the warp or weft of a fabric or, as in most cases, each kind of fibre may be confined to separate threads, forming part or the whole of the warp or weft. Union Cloths are generally "cross-dyed," although they may also be "dyed in the grey." In the case of "cross-dyeing," the cotton warp is dyed the desired colour and interlaced with a wool weft, which is in a grey or undyed condition, and subsequently the weft only is dyed, this being possible as the affinity of cotton and wool are different. When light colours are desired in the fabric the cotton warp and wool weft are woven in a grey or undyed condition, and then both are dyed in the fabric: this method is styled "dyeing in the grey." In some cases the wool and cotton are treated separately, in others union dyes are employed.

The principal Union Cloths met with are: Brilliantines, Glacés, and Sicilians, plain weave materials with cotton warp and mohair weft; Alpacas, plain or twill weave, cotton warp and alpaca weft; Lustres, plain or twill weave, cotton warp and lustre or demi-lustre weft; Italians, five-shaft weft, saten weave, cotton warp, fine Botany weft; Cashmires, 2:1 weft twill weave, cotton warp, fine Botany weft; Beattie Twill, five end (four weft and one warp) twill, cotton warp, demi-lustre weft. All authorities do not agree as to what constitutes a Union, the following definition having been met with: "Fabrics are union when composed of two materials otherwise than by blending." In the Morley (Yorkshire) trade a "Union" is a cotton warp cloth of boiled and teazled finish superficially resembling Broadcloth.

Union Yarns.—These yarns, as the name indicates, are the product of combining two or more different materials into a yarn, generally wool and cotton or wool, and any of the many vegetable fibres capable of being spun.

Union Yarns may be produced by the mixing together of the two or more different fibres when they are still in the state of loose fibres: in such a case the cotton fibres act as binders upon the rest of the fibres. When the various fibres are thoroughly mixed together, the mixture obtained is spun: this produces the variety known as Carded Union Yarns. Another form of Union Yarn is obtained by twisting together two threads of different material. Some Union Yarns have the appearance of pure wool threads, and only careful scrutiny will reveal the presence of cotton fibre: this type of yarn is known by the name of Angola yarn.

Union Yarns, being composed of materials that are not affected by dyes in the same way, can be recognised when found in a so-called wool fabric from the fact that the wool in the yarn will have taken up the dye, whereas the cotton will not have done so to the same extent, but will have retained more or less its original colour.

Velour.—This name is given to a soft, thick, nappy flannel used in the making of dressing-gowns, etc., made from either wool or cotton or a combination of both. As a cotton fabric, it is of the coarse, stiff, pile variety. The name is French for Velvet, hence its use in connexion with a pile-surface fabric. As a woollen and worsted term, there is a considerable diversity of opinion as to the precise cloth designated by the term Velour. Some manufacturers would class as Velours any cloth having a soft velvety nap, others make finer distinctions, classing one as a "face-finished Cashmere," a second as a "Saxony," with Velour slightly different from either of these.

Velvet.—This name is given to a pure all-silk pile fabric with a pile weave, the distinctive feature of which is that the surface consists of silk threads or fibres standing closely together like the bristles in a brush. These threads appear as threads sheared off smooth, so as to form a uniform or even surface. "All-silk" in this definition of Velvet applies to the pile only, for Velvets are so generally woven with a cotton back that a Silk Velvet should be considered as having a cotton back unless specially designated as silk backed."

Velvet Finish.—A finish produced upon woollen fabrics by wet-raising in various directions and subsequently cropping the pile thus raised level, which leaves the velvet-finished material with a fairly dense pile of a velvety appearance.

Velvet of Silk mixed with other Fibres.—This class of fabric includes all pile fabrics which, in the first instance, answer to the description of Velvet, *i.e.*, have their pile shorter than that of Plush, and the pile of which, whilst being partly of silk, contains other animal fibres, such as wool or mohair, or even vegetable fibres, such as cotton. Where it is clearly stipulated that they are "Velvets of silk mixed with other fibres and having cotton backs," the foundation cloth must not contain warp or weft threads wholly or in part composed of any material other than cotton.

Velveteen.—This name is given to the class of fabrics that in reality are but Cotton Velvets. Like true Velvets, they are woven with a pile weave, the distinctive feature of which is that the surface consists of threads or fibres standing closely together like the bristles in a brush. These threads appear as threads sheared off smooth, so as to form a uniform or even surface. Velveteens are generally woven on the weft pile basis, that is to say, that the "pile floats" or "flushings" are produced with the weft threads—which are afterwards cut—additional to and on a firmly constructed woven ground texture. Weft pile can be recognised by removing from the fabric a weft thread, when, upon withdrawing this thread, it will be seen that the bits of "cut pile" are not looped round it or attached to it but remain entangled among the warp threads. Common Velveteen, which is "all cotton," will be identified as a weft pile in this manner. Velveteens are also known as Velverets or Fustians. Standard widths for Velveteens are 19 inches, 22½ inches, 24½ inches, and 27½ or 28 inches.

Venetians.—A wool fabric, closely woven in a fine twill. As applied to a cotton fabric, it is used to designate a heavy, warp-face, Dress Satin (or Sateen) of strong texture and closely woven, dyed in the piece, silky and lustrous in appearance. Light weights would be sold as Sateen or Dress Sateen. Woven with about 200 to 250 threads to the square inch, the style of weave in itself tends to produce lustre; this is intensified by calendering and sometimes by mercerising the fabric. The weave is of an upright warp twill character, and the name was first applied to a dress face woollen cloth; later, worsted dress Venetians were made, and later still the name was applied to an all-cotton fabric of similar weave.

Vesting (Vestings).—A generic term embracing a wide range of fabrics more or less ornamented, used in most countries for men's vests, but used in China for either men's or women's outer or inner garments. Fabrics of several combination of weaves

showing fancy stripes or small checkings, and often coloured to the extent of some coloured warp threads appearing here and there on the surface and left floating (where not used) on the back of the fabric are common in this class of goods. This heading covers Welts, Piqué, Fancy Piqué, etc.

Vigogne.—The French form of the word "vicuña"; applied to a soft woollen dress material.

Vigoreux.—A worsted material, printed in the yarn so as to produce a mélange, or mixture, effect in colouring. This differs from Beige in that the yarns are printed before being spun, giving the finished goods the appearance of having been woven from mixed yarns.

Viyella.—A light cloth, largely made from cotton and wool scribbled together. It is similar to Ceylon Flannel and differs from it only in name. This fabric is one of many known under "trade marks 'patented' or 'registered' names," which are sometimes sufficiently popular to embrace many different weaves under one head.

Voile.—This name is used to designate a more or less transparent light fabric made generally of cotton. Woven with a square mesh produced by plain one-over and one-under weaving, Voile averages 55 meshes per inch, with an average width of 42 inches, and generally in pieces of 60 yards.

Voile when dyed is piece-dyed and not woven from yarn which was dyed previously to being woven. The yarn used in the weaving of Voiles is a hard-twisted yarn.

Woollen Voiles are also woven, the characteristics being similar to Cotton Voile, but in weaving Voiles with worsted yarns, if the yarn is not very free from loose fibres, the fabric is finished by having its face singed or sheared very close, so as to ensure a clear-faced material.

Wadding Pick.—A thick weft thread of low quality inserted often without interlacing between the two fabrics in a double cloth and between the two warps in a warp-backed structure. This gives weight and solidity to the fabric. The wadding pick remains out of sight, and the appearance of the fabric is not affected thereby.

Wale.—This term has the same meaning as "warp welt," or "welt," and is used to describe a fabric having thick raised cords at close intervals.

Warp.—Warp is the name given to that set of threads that runs lengthways of a piece of cloth. When the word "end" is used in connexion with weaving, it always signifies the warp thread, while each filling or weft thread is called a "pick."

Warp Pile.—Warp pile can be recognised by simply withdrawing from the fabric being examined a few "picks," or weft threads. If the material is a warp pile weave, then it will be seen that the loose bits of "cut pile" remain entangled or looped and adhering to some of the drawn weft threads. This can be easily seen if a common Velvet ribbon is experimented with, when, upon drawing out the weft threads separately from selvedge to selvedge, it will invariably be seen that each alternate weft thread will have the loose bits of "cut warp pile" attached. Where the material is extra closely woven it is possible for every weft thread that is withdrawn to have the loose bits attached in the manner described.

Warp-pile fabrics include two varieties, the "uncut pile," such as Turkish or Terry Towels and Towelling, Brussels Carpets, Patent Tapestry Carpets, etc., and "cut pile," like warp pile Plushes, Velvets, ribbons, etc.

Warp Print.—A fabric wherein the design, being printed on the warps prior to weaving, appears somewhat faintly and in an indefinite outline. *See* Chiné.

Warp Ribs.—The term "warp ribs" is used to designate a warp-surface weave in which, owing to the thickness of the weft threads (or picks) or to the grouping together of a number of weft picks, the warp threads are made to bend round them and, being thus thrown to the surface of the fabric, produce a ribbed appearance running from selvedge to selvedge in which the warp threads are on the face of the fabric. Poplin is a typical warp-ribbed fabric.

Warp Sateen. A common form of Cotton Sateen cloth is that woven with a "warp sateen" weave on the five threads and picks system, which results in four-fifths of the warp threads appearing on the face of the fabric and therefore four-fifths of the weft threads appear on the back of the fabric. The object of weaving on this principle is to obtain a smooth cloth surface by distributing the interlacing points and so destroying the common "twilled" effect. A Warp Sateen will lie much closer in the warp threads than in the weft threads, and therefore stronger in that direction.

Warp Welt.—Fabric having thick raised cords at close intervals, as in the case of Bedford Cords and Piques. In cotton

goods, when the cords run lengthways of the piece, the fabric is known as a "warp welt." Sometimes called "wale."

Warp-faced Cloth.—A fabric which shows on its face a greater number of warp threads than "picks," or weft threads.

Waste and Condenser Wefts.—These are made from certain waste cotton which accumulates in certain parts of the machinery during the process of spinning yarn. This waste is treated by special machinery, which spins it into a full, level, and soft yarn, which is used for weft in weaving Sheetings.

Waste and Flocks.—Cotton mill waste is the by-product derived from the cotton in its various processes through the mill. Each pound of cotton before it becomes cloth loses on an average 15 per cent. visible and invisible waste. The visible waste is of two kinds, hard and soft; hard waste, which has been made on spinning and subsequent machines, and which bears a slight twist; soft waste, which includes that part of the fibre rejected by all machines up to the spinning frame. The invisible waste is equal to the amount of evaporation of moisture in the cotton during the process of manufacture. Flocks are short fibres removed from cloth during the process of napping.

Waste Cloths.—Cotton fabrics woven from waste yarns, generally plain woven and of low grade. The weft thread is coarse and is spun from waste or short-fibre cotton.

Watering.—As a textile term, it is used to designate the process whereby certain distinctive effects are produced on the face of plain woven fabrics—especially silks. The process of giving a wavy or wave-like appearance in fabrics by either passing them through suitably engraved metal rollers which, bearing unequally upon the fabric, render the surface unequal, making it reflect light differently. The same result is obtained by pressing two plain woven fabrics together, when the coarser weft threads of the fabric produce the wave-like indentations on the face of the fabric it is pressed against. A fabric is said to be "watered" when ornamented by either of the above processes. The principle of this operation is that two fabrics of precisely similar build, when pressed together, naturally "water" each other, owing to the coincidence or non-coincidence of the threads or picks causing flatness or ribbedness of a sufficiently marked character under conditions of heat and pressure. "To tabby" is another expression for "to water," and the adjective "tabby," usually referring to a brindled cat, signifies streaked with wavy lines.

Weaving.—Every woven piece of cloth is made up of two distinct systems of threads, known as the warp and the filling (this latter is also known as weft), which are interlaced with each other to form a fabric. The warp threads run lengthways of the piece of cloth, and the filling, or weft, threads run across from side to side. The manner in which the warp and filling interlace with each other constitutes the weave. The term “end” in weaving is used to designate the warp thread, while each weft or filling thread is called a “pick.” The fineness of a cloth is expressed by saying that it has so many “ends” and “picks” to the inch. The character of the weave offers the best basis for classification of woven goods, and nearly all varieties of cloth may be classified under the following weaves:—

Plain weave	Double cloth weave.
Twill weave	Pile weave
Satin weave.	Canvas weave
Figure weave.	Lappet weave.

Web.—Web is the name given to a piece of cloth at the moment it is taken from the loom and previous to its having been treated to produce the special feature of the class of cloth the web belongs to.

Weft.—When the word “weft” is used in connexion with weaving or woven fabrics, it always signifies the filling threads, each of which is also called a “pick.” Weft threads run across the width of the fabric.

Weft Pile.—Weft pile can be recognised by withdrawing from the fabric under examination a few “picks,” or weft threads. If the material is a weft pile weave, then it will be seen that the loose bits of “cut pile” are not entangled or looped round or adhering to the weft thread that has been drawn out, but that they remain entangled among the warp threads.

If, however, a few warp threads are withdrawn separately, it will be found that every alternate warp thread, as a rule, will have the loose bits of “cut weft pile” attached or looped round.

Weft Ribs.—The only difference between these and warp ribs is that the weft bends and the warp lies straight. The term “weft rib” is used to designate a weft surface weave in which, owing to the thickness of the warp threads or to the grouping together of a number of warp threads, the weft threads are made to bend round them and, being thus thrown to the surface of the fabric, produce a ribbed appearance with the ribs running lengthways, in which the weft threads are on the face of the fabric.

West-faced Cloth.---A fabric which shows on its face a greater number of "picks," or west threads, than warp threads.

For Ladies' Wear :--

For Men's Wear : —

Naturally, also, the relation of weight to thickness varies with the composition of the cloth and the style of make, some "woolly" makes of 20 ounces being very thick.

Cotton fabrics are generally weighted by subjecting them to a process which causes them to absorb either zinc chloride, magnesium sulphate, magnesium chloride, glue, gelatine, starch, or alkali silicate. Woolens and worsteds are generally weighted with zinc chloride. Silk is generally weighted with muriate of tin, and few of the silks on the market are free from weighting. Modern methods make it possible to increase the weight of pure boiled silk to five or six times its original weight. Hooper, in his book on "Silk," states: "It was early found that silk would absorb about one-third its own weight of water without feeling wet to the touch. The dyer found that it would absorb other things besides water, muriate of tin amongst them." As a matter

of fact, it may be, and indeed it is, made by the dyer to take up with the dye, so much of that metal that 12 ounces of boiled silk can be increased in weight to 80 ounces, and yet look like very bright silk."

The term "weighting" has the same value as "filling" or "loading."

Welt.—The double thick portion or wide hem at top of plain hose.

Whip Thread. The crossing thread in a gauze fabric.

Whipcord.—This name is given to hard-twisted worsted twills in either solid or mixed colours. The twill or diagonal in this class of fabric is well marked and slightly raised, somewhat resembling the hard-twisted fibre lash of a whip.

White.—As a textile term, this word is applied to fabrics which are not in their loom state, *i.e.*, in the grey, but which have been bleached and rendered white.

White Brocades.—Under this name would be classed bleached fabrics of different weaves or combinations of weave in which the design appearing on the surface of the fabric is of a fancy, figured, or floral effect, usually of elaborate design. Soft spun wets are generally used in the weaving of Brocades and other figured cloths, as they fill and throw up better the figure produced than a hard twist yarn would do. White Brocades are all-cotton goods unless otherwise stated. Lappet and swivel figured fabrics would not come under the heading "Brocades"; such style of figuring is not brocaded.

White Cambric.—Cambric is a plain weave fine linen fabric of light weight and soft finish. Cotton Cambric, in which the yarn used is of fine cotton, is mostly met with. It is woven without a selvedge and generally leaves the loom in pieces of 120 yards, which are cut to shorter lengths. In plain white, a Cambric is finer than a Lawn. Cambric of French origin is generally finer in texture than the Manchester Cambric. Cambric varies in width from 32 to 46 inches and in length from 12 to 40 yards per piece. The finer qualities are made from hard-twisted cotton. The warp yarn is often of a different thickness to that used for the filling, and it is generally finished with a smooth glazed surface. The term Cambric is also commonly applied to Muslins. White Cambric is a bleached material.

White Drills, or Drilling.—White Drills are, when not otherwise specified, all-cotton medium and heavy weight single cloths woven as a three-shaft twill (two warp and one weft), which have been bleached but not dyed or printed. The better qualities of warp faced sateen-weave Drills are known as Satin Drill, and these are extensively exported to the Far East; their distinctive features lie in the closeness of weave, smoothness of surface, and finish.

White Goods.—A generic term covering a great variety of bleached fabrics, plain or fancy, covering various weaves or combination of weaves.

White Irishes.—The term Irishes originally was applied to linen fabrics which were mainly produced in and around Belfast. It is now used to describe certain cotton fabrics of plain weave similar to white cotton Calico. Generally in pieces 36 inches wide and 42 yards long, finished with a heavy starch finish.

White Italian.—The name White Italian is not generally applied to a white cotton fabric woven and finished as an Italian. Such a fabric is a White Mercerised Sateen; however, occasionally an invoice covering Coloured Italians will be found to include so-called White Italians. In such cases the colour assortment list (which generally accompanies, if it does not form part of, the invoice) will show the number of white pieces included in the shipment. The ordinary Italian is essentially a coloured or piece-dyed material, and, as white is not, in the piece goods trade, considered to be a colour, a White Italian cannot be considered as coming under the classification of Dyed Plain Cottons.

White Jean.—A White Jean is an all-cotton fabric woven as a three-end twill, similar in weave to a Grey Jean, but which has been subjected to a process of bleaching to turn it into what is known as a "market white" fabric. The process of bleaching proper is always preceded by a series of operations that have for their object the improving of the surface of the cloth by removing loose fibres, neps, and ends of yarn, and by cleaning and singeing the surface so as to free it from all "nap." The distinctive weave of this fabric is given under "Grey Jeans," which is the class of Jean most often met with.

White Lawn.—Lawn is a plain-weave light-weight cotton fabric of soft finish made from yarns varying from 1/40's to 1/100's. Lawn has a soft, smooth feel, which is due to the absence of sizing or starching and to the process of brushing and calendaring, i.e., passing the fabric through heavily weighted

steam-heated rollers. Lawns vary in quality and weight similarly to other fabrics, their weight varying between $1\frac{1}{4}$ and $2\frac{1}{4}$ ounces per yard; in width they vary from 27 to 46 inches and in length from 12 to 42 yards per piece. Lawn in plain white is coarser than a Cambric. The yarn used in the weaving of Lawn is generally of fine Egyptian cotton. White Lawns are also made of linen yarn, and when so made would be called Linen Lawn. India Lawn is a calendered fabric, about 12 yards to the pound and 28 to 36 inches wide in book fold or 40 inches in long-fold. Victoria Lawn has a very stiff finish. Bishop's Lawn is slightly heavier in weight than "Lince" or "Linen Linon," bleached and finished to a bluish tint, and derives its name from the style of finish. The same fabric finished differently would be known under other names. White Lawn is a bleached material.

White Muslin. - Muslin is a light weight, open, plain-weave cotton fabric made generally of low count yarns, that is to say, of fairly coarse yarn. Muslins, Lawns, and Cambrics are all materials which are similar in construction but vary by their quality, Muslin being the lowest grade of the three. A very common kind of Muslin is known as Butter Muslin or Cheese Cloth. Muslins vary in width from 32 to 46 inches and in length from 12 to 42 yards per piece. Foundation Muslin, Book Muslin, and Butcher's Muslin are varieties of Muslin so dissimilar to the true Muslin that they should not be considered as coming under the classification of true Muslin, which, whilst it varies considerably, should always answer to the description of "a fine, soft, thin, open, plain woven cotton fabric." White Muslin is a bleached material.

White Sheetings. - A bleached light or medium weight plain-woven all cotton fabric. Under the heading "Grey Sheet-ing" will be found a description of the two distinct varieties of fabric known as Sheetings. Where such Grey Sheetings have been rendered white by being bleached and are no longer in their loom state, they are known as White Sheetings.

White Shirtings. - Essentially a bleached all cotton fabric woven with a plain one-under and one-over weave, having the warp and weft threads approximately equal in number of threads and counts. It differs from Grey Shirtings only in finish, White Shirting having been subjected to a bleaching process after leaving the loom, whereas Grey Shirting remains in its loom state, i.e., in the same condition as when it was taken off the loom. The same remarks as to the similarity between a Grey Shirting and a Grey Sheetting applies to White Shirtings and White Sheetings. Similarly, a White Shirting may be termed

a White Calico, which is a term used to designate practically any cotton cloth coarser than Muslin. Varying in width and weight, they are generally put up in pieces of from 36 to 40 yards. The length marked on the outside of the piece may not always correspond to the number of yards in the piece if the yard is taken as one of 36 inches.

White Spotted Shirtings.—Like White Striped Shirtings, the ornamentation in this class of fabric would be produced by combination of weave and would not be the result of printing of be due to the presence of coloured yarns. The essentials of this class of fabric are similar to those of White Striped Shirtings, i.e., the fabric is all cotton and the ornamentation due to weave and weave only.

White Striped Shirtings.—The fabric which would properly come under this classification would be essentially all-cotton fabrics containing stripes, produced by a combination of weave and not the result of printing or due to the presence of coloured yarns. A plain-weave ground may be combined with a sateen-weave stripe. Such a fabric would not be called a Fancy Shirting, which in the trade is generally understood to be "either printed on the woven, bleached fabric, or of fast colours, dyed upon the warp, or combination of each." White Striped Shirtings are mostly made on a Jacquard loom, and in the white condition the woven pattern constitutes the only effect or ornamentation in the finished cloth.

White T-Cloth.—A bleached all-cotton fabric, plain woven from low quality yarns. An ordinary T-Cloth which has been bleached. Generally sold in lengths of 24 yards and varying in width from 32 to 36 inches. The name is said to be derived from the mark **T** of the original exporters.

White Venetians.—What has been said of White Italians holds good *mutatis mutandis* of White Venetians. Such fabrics are in reality White Warp-faced Sateens, and, white not being considered a colour, they do not come under the classification of Dyed Plain Cottons.

Widow's Lawn.—A better quality of Lawn made from linen, well woven, very clear and even in texture.

Width.—The practice has grown up in the trade to refer to the width of a fabric either as "actual" or "nominal." The former term explains itself and means that the width as given is actually that of the piece referred to, and that it is not less than

stated. "Nominal," on the other hand, is understood to mean that the fabric referred to may vary by as much as half an inch below the width specified on the contract.

Window Holland.—A plain woven all-cotton cloth, stiffened after weaving with about one-fifth of its weight in starch or other sizing material. It is used as window shades.

Wolsey.—A proprietary name applied to certain all wool materials, especially underwear.

Wool.—Wool is the soft, curly covering which forms the fleecy coat of the sheep and other similar animals, such as the goat, alpaca, llama, vicuña, and camel.

The chief characteristic of wool is its felting or shrinking power. This felting property, from which wool derives its chief value and which is its special distinction from hair, depends in part upon the kinks in the fibre but mainly upon the scales with which the fibre is covered. The process of felting consists in the fibres becoming entangled with each other, and the little projecting scales hooking into each other and holding the fibres closely interlocked.

The wool of commerce is divided into three great classes:

1. Short wool, or clothing wool (also called carding wool), seldom exceeds a length of 2 to 4 inches.
2. Long wool, or combing wool, varying from 4 to 16 inches.
3. Carpet and knitting wools, which are long, strong, and very coarse.

Combing wools take their name from the process of "combing" which they undergo when being prepared for spinning into yarn. Combing wools are longer than carding wools; they are also harder or more wiry and less inclined to be spirally or kinky.

Carding wools—made to cross and interlace and interlock with one another—are shorter than combing, and, in addition, they possess the power of felting (that is to say, of matting together in a close, compact mass) to a much greater degree.

The first and finest clip of wool is called lamb's wool; it is taken from the young sheep at the age of eight to twelve months and, never having been clipped before, is naturally pointed at the end. All subsequent cut fleeces are known as wether wool and are less valuable than the first clip. The ends of such wool are thick and blunted on account of having been previously cut.

Wool, unlike cotton, is not capable of being worked into a yarn without first being thoroughly cleansed of its impurities.

Wool-dyed.—A term applied to fabrics dyed in the loose or top form—as distinct from yarn-dyed or piece-dyed.

Woollen.—This term is used in contradistinction to *worsted*, and implies difference of material and method of manufacture. Wastes, shoddy, and blends of material other than wool are referred to as “woollen,” in opposition to “all wool.”

Woollen and Cotton Flannel.—A fabric answering to the description of true Flannel, usually woven with either a plain or twill weave, soft finished, but which is made from carded union yarn, *i.e.*, yarn composed of wool and cotton in varying proportions according to the quality of the material it is intended to produce. If a Woollen and Cotton Flannel were described as a Union Flannel it would be composed of distinct yarns, some of which were all cotton and some all wool. In its broad acceptance the term is applicable to any fabric woven partly of wool and partly of cotton to resemble true All-wool Flannel.

Woollen and Cotton Mixtures.—This term is used to designate fabrics which are composed of the fibres of wool and cotton which have been blended or scribbled together rather than to fabrics composed of distinct threads which are all-cotton and all-wool yarns woven together. A cotton warp and wool weft fabric is a union, not a mixture. Mixtures may be recognised, when dyed, by a careful examination of the fibres constituting the yarn. When such fibres are not of the same colour, it will be found to have been due to the difference of affinity for the dye between cotton and wool. The burning test is not close enough. Carbonising is the surest test that can be applied to determine the presence and percentage of cotton in any Woollen and Cotton Mixture fabric.

Woollen Fabric.—The typical woollen is a full handling fabric in which structure and colouring cannot always be defined on account of the threads and picks, and even the fibres, having become thoroughly intermingled in passing through the operations of finishing. Strictly speaking, a woollen fabric should be made of fine wool (possibly noils included); but in the English Law Courts a definition of “woollen” fabrics as being composed of mungo, shoddy, cotton, etc., has been accepted.

Woollen Lastings, Craped.—A fabric similar in the main to a Plain Lasting, but which, owing either to special process of weaving, chemical process during finishing, or to the action of

suitably engraved rollers through which the material is made to pass, has a face finish resembling Crape Cloth, Plain, under which heading will be found the distinctive characteristics of Crape Cloth.

Woollen Lastings, Figured.--Like Cotton Lastings, this fabric is essentially a plain twill or kindred weave fabric, firmly woven from hard-twisted yarns. It is woven from strong wool and can be described as a fine, durable fabric of a somewhat hard handle, but smooth in appearance and ornamented by the introduction of a figure, pattern, or design produced either by means of an extra thread or by combination of warp and weft threads.

Woollen Lastings, Plain. A plain twill or kindred weave fabric firmly woven from hard-twisted yarns. It is woven from strong wool and can be described as a fine, durable fabric of a somewhat hard handle, smooth in appearance, and free from any ornamentation produced either by weaving or printing. Used extensively in the manufacture of boot and shoe uppers.

Woollen Yarn in appearance possesses a fringe-like covering which gives it a fuzzy appearance. This is arrived at by using shorter wool than in the manufacture of worsted yarn and by giving it a twist. This fuzzy appearance distinguishes it from worsted yarn, which is a straight yarn in which the component fibres lie smoothly and parallel to each other. Woollen yarn is particularly suitable for the manufacture of cloths in which the colourings require to be blended, the fibres napped, as in Tweed, Cheviot, Doeskin, Broochloth, Beaver, Frieze, Churchilla, Blanket, and Flannel. Woollen yarn may be said to be a thread in which all the component fibres are entangled into each other and are in all different directions; this results in a yarn which is rough in appearance, non-lustrous, and more irregular than worsted yarn. It is only in this type of yarn that low-grade materials, such as mungo, shoddy, or extract, can be utilised. The fibres which constitute a woollen yarn are not as readily separated from the body of the yarn or cloth as in the case of worsted.

In the case of woollen yarn there are numerous systems for denoting the count, varying with the locality in which it is spun and the character of the product. In the United States there are two systems employed, but the one in most general use is known as the "American run count." This is based on the number of "runs," each containing 1,600 yards, to the pound. Thus, a yarn running 8,000 yards to the pound is called a "5-run" yarn, a yarn with 5,200 yards to the pound is equal to a "3½-run." In the vicinity of Philadelphia woollen yarn is based on the "cut," each cut consisting of 300 yards, and the

count is the number of cuts in a pound. Thus, No. 30 cut yarn consists of 9,000 yards to the pound. A similar system prevails in England, where 200 yards go to the "cut," and the number of "cuts" per pound equals the count. In certain parts of England (Yorkshire) 256 yards go to the hank. The count is also arrived at on the basis that the number of yards per dram equals the count.

Worsted Diagonal.—The name explains itself and is applied to a worsted cloth having as its chief characteristic a prominent weave effect running diagonally—from left to right—across the face of the cloth. Generally in solid colours and finished so as to bring the weave into prominence.

Worsted Lastings.—A smooth, warp-faced, sateen-weave fabric woven from worsted warp and weft, having a plain-weave effect on the back of the fabric. Generally piece-dyed black. Worsted Lastings average 30 to 31 inches in width and 29 to 30 yards in length per piece. Met with in three grades of quality. Average Bradford price for the best grade was, for the 10 years ended 1914, about 31s. 5d. per piece.

Worsted Yarn is a straight yarn, *i.e.*, a yarn produced from straight fibres; it is invaluable in the production of textile fabrics in which lustre and uniformity of surface are the chief characteristics. They enter into the manufacture of Zephyr, Saxony, Serge, Bunting, Rep, etc. Yarn is measured by a system of "counts"—the number of yards of yarn to the pound. It is put up in hanks of 560 yards each, and the number of such hanks that are necessary to weigh 1 pound determines the count, so that if No. 30 yarn is mentioned, it is a yarn 30 hanks of which, or 16,800 yards, weigh 1 pound. The main characteristic of worsted yarn is the arrangement of the fibres, which are so arranged that they are parallel to each other in a longitudinal direction.

The yarn thus produced is a smooth, lustrous, and level yarn, these qualities being absent in woollen yarn. The fibres which constitute a worsted yarn are more readily separated from the body of the yarn or cloth than in the case of a woollen yarn.

W-Pile.—This term is used to designate a fast pile and originates in the form taken by a piece of fast pile when removed from the fabric. In a fast-pile fabric the pile cannot be driven out through the back of the fabric by pressure applied to the pile, owing to the fact that the pile is virtually bound into the material and held in place by two threads from the top and one from behind. See Pile Weave.

Wright's Underwear, Imitation.—This class of underwear is essentially a knit cotton underwear made from a combination of bleached cotton yarn and dyed yarn. The knit fabric is raised on the inside. The dyed yarn used in the manufacture of this class of underwear is often of a blue or brown colour.

Yarn, Cotton, Grey or Bleached. In its unqualified form the term Cotton Yarn is used to describe "single" yarns, and Cotton Yarn, Grey or Bleached, is understood to be cotton thread and carded yarn, warps or warp yarns, in singles, whether in bundles, skeins, or cops, not advanced beyond the condition of singles by grouping or twisting two or more single yarns together and not advanced beyond the condition of bleached by dyeing, colouring, printing, gassing, or mercerising.

Cotton yarn is subdivided into three groups, coarse, medium, and fine—according to count:—

No. 20's count and under	coarse.
Nos. 21's to 40's	medium
No. 41's and over	fine

Cotton yarn is sometimes found as a Mercerised Grey Yarn. The fact that cotton yarn is in the unbleached state does not necessarily mean that it has not been advanced beyond that stage; it may be in the grey and at the same time be mercerised. See "Cabled Yarns" and "Folded Yarn."

Yarn-dyed.—Yarn-dyed goods are made of yarns that are dyed before being woven or yarns spun from wool that has previously been dyed. Yarn-dyed may be distinguished from piece-dyed fabrics by unravelling the threads of each knit. Yarn-dyed fabrics show that the dye stuff has penetrated through the yarn, while in the case of piece-dyed fabrics the dye stuff has not the same chance of penetrating the yarn as completely.

Zephyrs.—Lightly constructed, coloured, plain woven cloths, well finished, in the pure state, principally woven from fine cotton yarns. There are also silk and cotton woven Zephyrs and woollen Zephyrs. See Madras.

Zibeline.—The French name for Sable, used to designate a dress or cloak material having a hairy surface.

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HEADINGS UNDER WHICH SAMPLES ARE CLASSIFIED.

SECTION NUMBER.	SUB SECTION NUMBER.
1. Grey Cottons.....	<ol style="list-style-type: none"> 1. Shirtings and Sheetings. 2. Drills and Jeans. 3. Shirtings and Sheetings, Native. 4. Drills and Jeans, Native. 5. Not specially enumerated.
2. White Cottons.....	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Brocades. 4. Brocades (with finish). 5. Striped or Spotted Shirting. 6. Striped or Spotted Shirting (with finish). 7. Crimps and Crape. 8. Crimps and Crape (with finish). 9. Lenos. 10. Not specially enumerated.
3. Printed Cottons.....	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Furnitures. 4. Crape. 5. Crimps. 6. Muslins, Lawns, and Cambrics. 7. Lenos and Balzarines. 8. Duplex or Reversible. 9. Blue and White T-Cloth. 10. Not specially enumerated.
4. Dyed Plain Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Crimps. 4. Crimps (with finish). 5. Drills, Twills, and Jeans. 6. Lawns, Muslins, and Cambrics. 7. Hongkong-dyed. 8. Lenos and Balzarines. 9. Native. 10. Native (with finish). 11. Not specially enumerated.

SECTION NUMBER.	SUB-SECTION NUMBER.
5. Dyed Figured Cottons	<ol style="list-style-type: none"> 1. Figured. 2. Figured (with finish). 3. Native. 4. Native (with finish). 5. Not specially enumerated.
6. Raised Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Dyed. 3. Printed. 4. Duplex Printed. 5. Dyed and Printed. 6. Dyed and Duplex Printed. 7. Yarn-dyed. 8. Figured White. 9. Not specially enumerated.
7. Coloured Woven (i.e., yarn-dyed) Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Figured. 4. Figured (with finish). 5. Crimps 6. Crimps (with finish). 7. Plain Native. 8. Plain Native (with finish). 9. Figured Native. 10. Figured Native (with finish). 11. Not specially enumerated.
8. Dyed and Printed Cottons	<ol style="list-style-type: none"> 1. Plain. 2. Plain (with finish). 3. Crimps. 4. Crimps (with finish). 5. Figured. 6. Figured (with finish). 7. Native. 8. Not specially enumerated.
9. Velvets and Velveteens (Cotton)	<ol style="list-style-type: none"> 1. Plain. 2. Printed or Embossed. 3. Embroidered. 4. Dyed Cords and Corduroys. 5. Undyed Moleskins. 6. Not specially enumerated.
10. Plushes and Velvets	<ol style="list-style-type: none"> 1. Plain Pure Silk. 2. Figured or Embossed. 3. Silk Seal (with cotton back). 4. Silk with cotton back.

SECTION NUMBER.	SUB SECTION NUMBER.
10. Plushes and Velvets— <i>cont.</i>	5. Silk mixed with other fibrous materials (with cotton back). 6. All-cotton Plush (including with finish). 7. Not specially enumerated.
11. Silk Piece Goods.....	1. Plain. 2. Figured. 3. Plain Native. 4. Figured Native. 5. Ribbons (all silk and mixtures). 6. Not specially enumerated.
12. Silk and Cotton Fabrics...	1. Plain 2. Figured
13. Woollen and Cotton Mixtures.....	1. Plain. 2. Figured. 3. Poncho Cloth. 4. Spanish Stripes 5. Union Cloth 6. Plain Lustres. 7. Figured Lustres 8. Not specially enumerated.
14. Woollen Fabrics	1. Habit, Medium, Russian, and Broad Cloth. 2. Bunting. 3. Camlets, Dutch. 4. Camlets, English. 5. Flannel. 6. Lastings (all kinds). 7. Spanish Stripes 8. Long Ells. 9. Not specially enumerated.
15. Linen and Linen Unions ...	1. Plain. 2. Figured.
16. Hemp and Hemp Mixtures	1. Plain and Figured 2. Variegated.
17. Miscellaneous.	

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